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CLINICS.

Clinical Lectures.

THE TRUE AND FALSE PALSIES OF HYSTERIA.

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GENTLEMEN: The case to which I drew your attention at my last clinic is here again, a girl, rather wanting in the signs of sexual ripeness, although sixteen years old. You will recall the fact that she lost the use of the right arm because of having been alarmed. The scare brought on what every woman knows as an attack of hysterics—our ancestors called it the vapours. The girl cried and laughed by turns, and then had a slight fit, on coming out of which she could no longer lift her right arm, or rather she could lift it but a few inches. On finding this to be the case, she grew much concerned, and by and by could not lift it at all, the idea that it could not be raised helping, as is apt to be the case, to make the trouble worse. There seems to have been no deceit, but perhaps the first feebleness may have been slight, and the power of her belief in her want of force—great—and this is rather the more likely since, as you saw, I raised the arm and said, "Now you can keep it up," which she did. You see that it seems again palsied. A new order restores it, and she lifts it without much effort, having won a belief in my being able to aid her. I send her away with a lightly uttered word or two as to the use of the hot iron, if she again loses power. The warning may answer or may not. We had a case very like this two years ago. I believe it got well.

We see here among the ill-fed, needy, and worried, a good many cases of hysterical loss of power, and I meet a yet larger number among women of the upper classes, where the disease is caused by unhappy love affairs, losses of money, and the daily fret and wearisomeness of lives, which passing out of maidenhood, lack those distinct purposes and aims which, in the lives of men, are like the steadying influence of the fly-wheel in an engine.

It is my present wish to speak of some of the many kinds of hysterical

paralysis, and to state, so far as I can, the means which, in my own practice, have been used for the relief of these baffling and annoying cases.

The group of instances of lessened power which I shall here discuss will include the usual forms of hysteric paraplegia and hemiplegia, and that which I shall call double hemiplegia. I shall not attempt to cover the whole range of hystero-palsies, but seek chiefly so to define a certain number as to allow me to speak of their treatment. I shall also describe four forms of seeming loss of power, only one of which is hysteric in nature, and not found elsewhere with the same features. I allude to hysterical motor ataxia.

The others are palsy from the rule of an idea, general paresis, and consciously mimicked palsy.

All three of these may be and are seen outside of hysteria, but they find in it a fertile soil, and are none the easier to treat when they are masking in this disguise.

One of the chief troubles in clearly knowing and in dealing with all of these forms of disease is due to the fact that in most cases they exist in union. The case of palsy may be partly real, partly pure weakness, which can be overcome, partly loss of power from want of belief in being able to move, or conscious mimicry may be added to palsy or to the forbidding influence of a regnant idea, or to the true hysteric palsy may be joined ataxy of motion. For such vexing marriages of disorders, and for their offspring of doubt, we must be ready and watchful. They make hysteric lack of power hard to define, hard to treat, full of surprises, and unfailing in interest and variety. Take this for an instance: You have a case of extreme hysteric paresis to treat. As a rule it is readily cured. You predict a clear and happy future. As time wears on the mere weakness is gone, the limbs are plump again, the cheek red, and then you find, as I have found, that hidden in the mere weakness there is a distinct amount of motor palsy—a mild, one-sided, loss of power—a true hysteric palsy, and not at all easy to cure. I shall pick for you, out of my note-books, cases of each of the forms of disease I have just spoken of, and shall try to make plain to you how I treat them. There were once no cases so much dreaded by me. There are now none to which I go with so much pleasure. I am sure that I treat them to-day with a success I could not once have gained, and I think that what success I have had has been due to more exact ideas as to what is needed, and that unflinching purpose and action which grow out of distinct views.

The first case I shall state ended in death, and is for that reason the more strange because death in hysteria is rare.

Mrs. C., æt. 36, a strong woman, and in all ways well, lost by sudden death a child and her husband. Thus having cast on her the care of a large estate, loaded with many burdens, she began to show excess of anxiety as to her affairs, and from being sweet of temper became abrupt and full of unreasonable doubt as to her advisers. The worry brought with it speedy loss of blood globules, and as she was a woman who flowed very fully each month, all these causes together began to tell. This is the kind of thing we see much of in medicine. The books say this, that, or the other causes Hysteria. In practice it is usual to find two or three causes—acting to assist one another. This woman was quite ready for an outbreak of some form of nerve trouble, when of a sudden she met the final blow in the form of a telegram. The news it bore was neither good nor ill, but by evil luck

the writing looked like that of her dead husband, and she began to laugh with that strange want of appropriateness in emotional expression so common in the nervous. Awaking next day her legs seemed heavy, which caused her great alarm. At once, as she told me, the fear of palsy arose in her mind, and haunted her the more as, day by day, the feebleness grew worse. She was in Germany when taken ill, and seems to have been looked upon as suffering from an organic malady, for she was treated with nitrate of silver and the hot iron. Then as she failed to get relief anywhere, she was sent from one spa to another with a skill which we are yet far from being able to reach, and at last came home to America, where I saw her often and until the close of her life.

This was what I found: A woman of 35, height 5 feet 2, weight 170, flabby, and thin blooded; all the organs were normal. On the left side of the vagina was felt a tumour about the size of a walnut. It was very tender, and firm pressure on it gave rise to nausea and distress down the left leg. I had no doubt that this growth was a displaced ovary, but, despite this change of place, the left iliac fossa was tender to touch, with what we call ovarian tenderness. Was it ovarian? Hardly, in this case. I have been told by Dr. Goodell that he has seen this same sensitiveness in other cases where the ovary had been displaced, and probably too much has been and is made of this symptom. The tenderness in Mrs. C.'s case was strange because it was, so to speak, an island, and all about it to the waist and down to the feet the body was without sense of touch or pain, or of heat and cold. In tracing this defect upwards it was found to cover the left breast, but this was so to-day, and then to-morrow it was less, the upper limit ranging from the navel to the left armpit.

Motor power was failing when I first saw her, but this had been the case before, and had been followed by a change for the better.

The plan pursued in treating the case was one to which I groped my way a few years ago. My patient was very thin blooded, and yet very fat. Such cases for some reason not clear to me are more hard to redden than are those of thin people in like states of blood. But if you can safely cause these persons to lose flesh, as they are helped to remake it, you may sometimes redden them with ease, and to double the number of blood globules is sometimes to lift a woman above the low level of health, which is one, at least, of the factors of hysteria.

Mrs. C. was, when I saw her, sitting up most of the day, and sewing, writing, and the like, when not too nervous. I put her in bed, and employing as a diet milk alone, with a little rice water or barley water, I began to lessen the amount given, until, using less than a quart a day, her weight fell off at the rate of about a quarter to half a pound a day. When she showed signs of weakness I added beef soup to the diet for a day or two, and thus in one month brought down her weight some twenty-four pounds. This could not with safety be so quickly done unless the patient were kept inert and supine. Then the milk was by degrees increased. Raw beef and vegetables were added, malt extract was used before meals, a little red wine or champagne was allowed, and iron was given freely, the feeding being frequent. When I made the increase in diet I began to arouse sensation by the use of the wire brush, and with induction currents.

Now in common palsies, or in those from nerve wounds, feeling is apt to come back first, motion last; but in hysteric palsies, as I think, the gain in action and motion may go on, and even reach a useful amount

while yet the lack of feeling rests as it was when the treatment began. Just this change took place in Mrs. C.: She grew brighter, more happy, gained in colour and flesh, and began to move her legs. In a month after she reached full diet she could walk with some trouble, and about this time the sense of touch showed signs of betterment, but the power to feel pain was unchanged, and, in fact, was never complete in the left leg.

Next began a plan of steady, urgent calls upon her for increase of the use of her limbs, so that before long she was able to walk out of doors. At this point I fear there was a mistake made in the treatment. Thinking the battle won I pushed her too hard, and one day after walking much further than usual she felt an excess of fatigue. Returning home she gave out of a sudden, and the morning after was again unable to stir either leg. I may pause here to repeat as to this matter a warning I have often given. It is to urge on you the utmost care as to allowing a hysterical patient on the way to health—I mean, of course, one who has lost power—to do more each day than fulfil the ordered task of that day. Most cases of hystero-palsies are easily tired, and it is almost sure to be the case that they cannot make a long effort without showing the effect in some way; moreover the mental results of extreme tire are to be feared, because any positive, real sensation is apt to become the peg, so to speak, on which the patient may hang the complement of a larger and less real sensation.

More slowly this time Mrs. C. got back some control over her movements, but at a certain point the gain ceased, and we made no further progress, nor did this surprise me. Hysterical paraplegia is more hard to cure than any other hysterical trouble except, perhaps, multiple contractures, and I felt that I had done well to win what I had won.

About six months later this lady died after a brief illness, which seemed to me more like a sudden and complete palsy of the pneumogastric nerves than anything else. No examination post mortem was allowed. I have known three deaths in hysteria; all were abrupt, and two were due to acute congestion of the kidneys.

Of that more common type, the palsies of one side of the body, you have seen a number. They are more frequent than paraplegias; less hard to cure, but quite lasting enough to make you cautious as to what you predict about the future. Where they occur in the feeble and thin-blooded, who have by degrees grown emotional, tearful, and weak of will, you may have more hope of helping them than if they are met with in robust people of non-emotional type. Such there are—people in whom the usual emotional elements which go to build up this temper of mind are wanting, or are small in amount. The former offer through the relief of their nutritive defects chances of obvious nature; the latter are apt to be bright or even able women, who enlist their mental forces in behalf of their symptoms, and treat the hated charge of being hysterical with utter scorn.[1]

I shall not take then the most common cases of hysteric hemiplegia, but one of the forms not well described as yet, and which I shall, in advance, venture to call double hemiplegia. This, as we shall see, is not merely another name for paraplegia.

Miss B., a sturdy, handsome girl, æt. 16 years, had a series of ills one on another from time to time. The first sign of trouble was twitches of

[1] I ought, perhaps, to add that these women are usually mobile and excitable by nature, prone to laughter more than tears, so that it is hardly exact to say they are not emotional. Their form of too ready emotional disturbance lies merely in an unusual direction for the victims of hysteria.

the eyelids, and tears on reading; then there was a pause of two years. The next disturbance was a noisy and obstinate hiccup, during which the iliac fossæ became tender, and a single hypodermic use of morphia was followed by convulsions. Next came hysteric loss of desire for food, nausea, pains in the left arm and leg, and spasm of the vessels in the left leg, so that it became white and cold. Up to this time she still walked out; but in the summer of 1878 the use of galvanism is said to have been followed by sick stomach and loss of power to stand. In the autumn she got rid of immense masses of hard feces, when all the symptoms improved for a time. The next winter was passed in bed, vomiting a good deal; eating little; the bowels very hard to move; the urine passed every hour. About this time also she began to shun light, and came at last to living, with covered eyes, in a darkened room. When I saw this young lady I was struck with the thorough type of the emotional hysteric person she showed; nor from the usual weak will to the usual love of sympathy was there any tint wanting to the picture. I watched her for a few days without ordering treatment until I learned all I could of herself, her history, her home-life, her pursuits, her ambitions, and her mental powers. Then a talk with a watchful nurse helped me further, and I saw clearly that I had to do not with a clever woman who may be won over, and who is flattered by the tribute paid to her mind when you insist that to cure her she must be made to understand and agree with you, but with a child who to be made well had to be calmly and firmly ruled, and held day by day to rigid account. She was at once shut up, with a good nurse, and kept at rest in bed, not being allowed to use her hands even to feed herself. As she had been able to knit and sew, and be read to, and to receive many visits, the sense of the irksomeness of the treatment soon made her eager to do anything I wished. Then began a system of bribes. She was told that if she could learn to bear the light she would be able to be read to, but that the nurse could not be allowed to strain her eyes. It would have been easy to open the windows and say you must bear the light, but if she herself gained this point of vantage, it would have the great value of being a self-conquest. In a few days I found the sunlight bright in her room. Then she was asked to overcome the habit of regurgitating her food. One or two scoldings, some show of disgust, and the promise that she should soon feed herself if she obeyed my wishes, helped us through with this. There were relapses; but as I found she hated milk I felt forced to put her back on the milk diet we began with whenever she threw up a meal, so that before long we heard no more of the vomiting; meanwhile the steady feeding and the use of massage, and local muscle treatment by electricity, began to show in a gain of flesh and colour and firmness of muscle. She was now very weary of this unending quiet, and the time for education of the motor powers seemed to have come. Her loss of motion on the left side was very marked, and there was complete want of power to feel pain or to tell heat from cold; yet I could not make out any loss of vision or of colour-sense. The touch was not perfect, but she knew fairly well where she was touched, although she could not be tickled.

As regards the pain sense there was one very curious point, and I have seen this before. As the needle came within an inch or two of the middle line of the body it was felt, and the better felt the nearer it came to this line; nor do I recall having met with this fact in any case of palsy from organic cause. The right side of the body was palsied in a less degree, and only as to motion the leg far more than the arm. The same was the

case on the left side as regards all the forms in which the functions were deficient. Now as this case grew better the right side became well first, leaving the left hemiplegia as before, so that I have reason to speak of the whole loss as being due to a double hemiplegia. In other cases I have seen a general loss of sense and motion, and observed entire relief on the right side, leaving only a hemiplegia of the left.

My patient had some wasting of the left leg, and less good electro-muscular reaction on the left, but no pain on that side from any form of current. The tendon reflex below the knee-pan was good on the right; about one-half of this on the left; and what was new to me the jerk was sometimes due to the extensor, and sometimes due to the flexors, the extensors in the second case not seeming to move at all. Here was another of the oddities of this most strange disorder.

As is usual she moved her limbs best while in bed, and showed, when I came to let her sit up, or stand, the loss of balancing power, which is seen in all grave hysteric palsies, and is, indeed, almost a sure sign of the parentage of the disease.

I have often asked you to note another point which this case showed very well. You ask the patient to raise the leg. It is lifted an inch; you insist on effort, it is lifted higher; or if a great effort be made the motion consists of a series of lifts and pauses.

The reliefs of distinct hystero-palsies are said to be often abrupt. Under emotion or return of the menstrual flow, or on an order from some one, the patient gets well. I must say that in hystero-hemiplegia and paraplegia, with loss of feeling, I have not been so happy as to see these delightful cures. In hysteria with mere paresis, in the palsies from belief, or from a ruling idea, I have seen such results many times. Neither do I believe that all hysteria *is after a time* within control of the sick person; nor that she can in all instances run away in case of a fire, according to a popular medical belief. In fact I have now in my care a lady who was so tested by chance, and quite utterly failed to do more than fall down in her effort to escape from a house on fire.

I have felt the need to say this, even if too briefly, because I must add that the cures are to be made by a slow, steady, hopeful training of the will powers through every-day effort, which needs some caution not to err in the way of excess. A little nervousness is a bad sign, and it is well each day to attempt a very little—no matter how little if only we succeed, and can make the patient see it. I shall in another case be more precise as to the means used. Enough to say of this case that it went on slowly gaining ground, and was under my care a year before the patient could walk well enough on crutches to go home with a cheerful future. It was not a brilliant case, and it taxed nurse and doctor to the uttermost—a case urged and scolded, and teased and bribed, and decoyed along the road to health; but this is what it means to treat hysteria. There is no short cut; no royal road.

Let us take another case. It was as much like the last as it could well be except that the greater loss was on the left side. But there was one matter in which it differed, and this changed my whole manner of dealing with the malady. My new patient was a clear-headed girl of 18 years, once having had a vigorous will. She was described to me as unselfish, thoughtful, and intelligent, and as a woman only brought down to a state of hysteria by long illness and the want of helpful advice at the right moment. She was emotional and ashamed of her tears, and honestly hated the

whole matter of sickness. You will see such hysterical women. You will see others whose minds are like the back of a piece of needlework with a baffling absence of pattern, indistinct mentally, and with a low, whining, bleating voice that is by itself a tell-tale of the kind of the willless ataxia which seems to cripple the mind no less than the body. These are the hard cases to relieve. But to return to my more favourable case. I tried to make her see how much the defects of body have to do with those of mind, and therefore the need to begin by building up the body anew. When, after a time, the limbs began to round, and colour to come back to her pallid cheek, I set her to thinking how far the early troubles might have been within her control. I assured her that, although she could not now overcome at once the results due to habitual failure of self-control, repeated efforts would surely end in success. She was told that it was like the case of a bad temper, easy to hold in check at first, but if long unheld at last uncontrollable. It is not hard to open this point of view to a clever woman. You urge this idea from day to day; you ask her to try your way. She says I have done so, and then you point out that with ill health success was out of the question, while with rising health it might be easy. At last you get her to promise to fight every desire to cry, or twitch, or grow excited.

Above all you teach her the priceless lesson for a woman of the value of moods, of the ease with which she can get herself into a state of dangerous tension, of the necessity of learning not how to bear a thing, but how to approach the idea of bearing it in a state of calm. It is a long sermon, but I can only give these few pregnant texts. It is always apt to win with a woman of intelligence, and the fools are to be dealt with by other moral drugs than these, or the honest pill must be gilded with timely flattery or such better motives as may help it to find the woman's conscience, if that is to be stirred at all.

By and by, as one symptom after another gave way before her efforts, she became more and more sure that I must be right as to all; and I have seen few cases gain ground with equal speed. Nevertheless a whole year was needed to make her well able to take up afresh her full round of social and household duties. In fact even with the best of self-help from the patient the cure of any one of these cases is a long and arduous course of education.

Before leaving the subject of hysteric palsies I would say a few words as to the electric reactions. In most cases, and early in nearly all the muscle reactions are normal; but after a time, and in most old cases, these are less good than in health; nor do limbs long palsied fail to shrink somewhat, while marked wasting is rare. When there is loss of motion and of feeling Duchenne's axiom is correct; that is, we have then normal electric reaction of muscles and absence of all sensation of pain from the most severe currents. In some early cases I have seen a state of things not elsewhere spoken of. I saw it last week in a case of horrible chronic rhythmic spasms of the arms, with palsy of sense and motion in the legs. Dr. Yarrow, the attending physician, studied with me the electric state, which was curious. When with slow or rapid breaking of circuit (induced currents) we tested the leg muscles, the poles, even with currents unbearable by us, caused no motion until they had been steadily applied for from two to three minutes over any one muscle; but the reaction of nerve and muscle, one pole on each, was somewhat more rapid, although still very slow.

(*Conclusion in next Number.*)

ILLUSTRATIONS OF ANTISEPTIC SURGERY.

A Clinical Lecture delivered at King's College Hospital.

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GENTLEMEN: We have here the little boy on whom, at a former lecture, rather more than three weeks ago, you saw me operate for empyema, letting out a large quantity of thick yellow pus from the left pleural cavity by free incision in the infra-axillary region. You have seen him, several of you, from time to time in the ward; but I am anxious that you should have the better opportunity which is afforded by the theatre of seeing the progress of the case. This dressing was put on three days ago; on that occasion it was changed after an interval of five days. There is no real need that I should change it to-day, but I do so for the sake of showing you the boy's condition. Now that I have removed the dressing under the spray, you observe that it is almost free from discharge of any kind; it is, in fact, dry. I shall withdraw the silver tube that we have in the wound for the purpose of draining the pleura. This tube is filled, as you see, with white lymph, and it was because I saw this lymph in the orifice of the tube that I thought it well to take it out to make sure that the passage was clear. By turning the boy on his side, so as to make the opening the most dependent part, I am able to empty the pleural cavity completely.

It turns out, as I suspected, that the lymph in the tube had obstructed it. The perfect dryness of the dressing, combined with the appearance of the lymph, made me suspect this; and you see we have obtained from the child one ounce, not of pus, but of slightly tinged serous fluid. I should have been better pleased, for the child's sake, to have found, as on former occasions in this case, an entire absence of any fluid in the pleura; but for your sakes I am glad to see this serum, because it illustrates all the more strikingly the effects of antiseptic treatment. For I venture to say that this purely serous accumulation could not have occurred without antiseptic management.

Let me remind you of the principal features of this case. The left pleura was greatly distended with pus; the heart was pushed over to the right side, so that its apex beat at the right nipple. Aspiration had been repeatedly practised by the physician under whose charge he had been, with the usual result of aspiration in empyema—reaccumulation of the fluid, and that fluid always yellow pus. We opened the pleural cavity by free incision antiseptically, and from the time it was opened we have had no more purulent discharge. Now I do not hesitate to say that that sort of result could not have been obtained without compliance with two conditions—viz., affording free drainage to the fluid, and, at the same time, preventing the access of putrefaction. The failure of the aspiration has shown you that relief of tension of a merely temporary character is not sufficient. Aspiration removes tension for the time being; but the fluid soon reaccumulates in sufficient amount to reproduce decided tension; and that tension, acting in a reflex manner through the nervous system, brings about inflammatory excitement of the pyogenic membrane, into which the pleura has been converted by disease, and so reproduces the suppuration, on the same principle as it had been maintained previously. Therefore mere temporary relief of tension is not enough; we must have the permanent relief afforded by free drainage. But if, on the other hand, we had provided the free drainage, and at the same time not adopted efficient antiseptic means, we should, we may be quite sure, have had a continuance of the suppuration; because, though tension would have been prevented, the irrita-

tion of putrid liquid would have acted on the pyogenic membrane of the pleura, and this could not have failed to stimulate it to pus-formation. In the present case, the tube having become accidentally obstructed, there had been again a little accumulation, not sufficient to reproduce suppuration—only an ounce of it; and this accidental circumstance has given you the opportunity of seeing for yourselves, in a very indubitable manner, that the fluid effused has been serum, not pus. You have thus before you a striking illustration of the beautiful pathological truth that a pyogenic membrane ceases to suppurate when freed from irritation. Had I shown you a dressing soaked with serous discharge, you might perhaps have thought, "Are we quite sure that there is not here some pus, masked by some action of the carbolic gauze upon it?" But when you have the serous fluid before you unmixed, as it is in this measuring glass, there can be no mistake whatever.

At the same time that the local condition has been thus satisfactory, the child's general state has been equally so. Before the pleura was opened, he was becoming very much reduced, and the appetite was extremely poor; since the operation, instead of suffering from a temporary fever, as would be likely to be the case if we opened the pleura without antiseptic measures, the little fellow has suffered no febrile disturbance whatever, but from the first began to improve, and is now like a different child, taking his food well, and increasing in strength from day to day.

It is worth while to remind you of the means by which these results have been obtained. In the first place the skin was well washed with the 1 to 20 watery solution of carbolic acid, which has the power of penetrating the epidermis and hair-follicles and any greasy dirt that there may be on the skin, so that it is quite unnecessary to do as many of our German friends do, wash the skin with soap and water and afterwards with sulphuric ether. Give the carbolic lotion a little time to act, and it will be sure to purify the integument.

In the next place, the instruments and hands having been cleansed with the same antiseptic lotion, we made an opening into the pleura under a thoroughly trustworthy carbolic spray. This, perhaps, of all cases of antiseptic surgery, is that which, on the one hand, most tests, and on the other most demonstrates, the efficacy of the spray. It tests it severely, because at every inspiration there is a drawing in of air in some form into the pleural cavity. If the patient is an adult, we can say to him, "Hold your breath," at the moment we make the incision; "Hold your breath," at the moment when we take off the deepest part of the gauze in changing the dressing; but with a young child, who is not amenable to persuasion, we can have no control over the respiration, and consequently during the operation, and also afterwards, at every change of dressing, air is drawn freely into the pleural cavity in some form or other. It is therefore necessary, if the spray is to be effectual, to be particularly careful to have a thoroughly reliable apparatus for its production, and that all our manipulations are so conducted that there shall never be a chance of any air other than spray being introduced.

Empyema is, therefore, a case requiring very special care in the use of the spray; but if that care has the effect of preventing putrefaction—and that this has been the case here is amply proved by the fact which you have all had the opportunity of verifying as I handed round the glass—viz., that the serum which has been accumulating for days is, nevertheless, absolutely odourless—if, I say, we avoid putrefaction completely from first to last, under the circumstances of empyema treated by free drainage, this is a complete proof of the efficacy of the spray. The pleura has been filled again and again in the course of these three weeks with atmosphere in the form of spray, and there can be no reasonable

doubt that if ordinary unpurified air had entered in the same manner, carrying in its dust through the free opening, putrefaction would have occurred within the pleura. We have here, therefore, as good evidence as any experiment in a laboratory could afford of the power of the spray to correct the septic property of the atmosphere, or, in other words, to destroy the energy of the septic ferments which the atmosphere contains.

In the next place we have used carbolic gauze as a dressing. We have improved upon this gauze of late. The proportions we used of the ingredients were originally one part of carbolic acid to five of common resin, and seven of paraffin, the paraffin being added to prevent undue adhesiveness. We have now changed these proportions to one of carbolic acid, four of resin, and four of paraffin. By that means we have in the first place a gauze dressing with half as much carbolic acid again in it. It turns out that this is not too irritating, and therefore that is a great improvement; for the gauze is of course more efficacious antiseptically in proportion as it has more carbolic acid in it. From the diminution of the paraffin we have a little more adhesiveness, but that, I think, is positively an advantage. We do not find it causes any serious inconvenience, and on the other hand, it tends to prevent the disposition of dressings to slip upon the skin; it helps to keep them more securely in place. And then I may mention as a secondary, though not insignificant advantage, that though we thus increase so considerably the proportion of the carbolic acid, which is the most expensive ingredient, we have not added to the cost of the material as a whole, because pure paraffin[1] is so much more expensive than resin, that by diminishing the proportion of paraffin to the resin, we have cheapened the article more than we have enhanced its price by increasing the quantity of carbolic acid, so that the gauze is rendered slightly cheaper by this alteration of our proportions.

The gauze has been employed in the usual manner in eight layers, with a piece of mackintosh under the outer fold; but in a case like this we have also used the gauze in large amount in the form of loose-folded pieces underneath. In the earlier stages this is of great importance, because the flow of serum that takes place from the unsupported pleura in the earlier stages is exceedingly copious; therefore we have made the mass of gauze more than usual. In the adult it becomes necessary to change the dressings twice a day in these cases, but in this child the discharge being of course much less, once in the twenty-four hours proved sufficient.

Then, gentlemen, as to the keeping of this gauze dressing in position, you saw the elastic bandage round the edges of the dressing applied just sufficiently to bring the elasticity of the band into play, and so ensure that the edge of the dressing is always in contact with the skin, and thus, in spite of the respiratory movements, we get accurate apposition of the dressings, a point of great value with reference to the security of our results.

With regard to the kind of tube employed for drainage, for the first few days we had one of caoutchouc, as usual. There was only this difference as compared with its use in ordinary wounds: that into each of the two loops of silk connected with its orifice we introduced a substantial mass of gauze (soaked, like the deepest pieces of loose gauze, in the carbolic lotion), to make sure that the tube should not be sucked into the pleural cavity, as it might be if there were only the silk thread applied to the skin. If the drainage-tube were to enter the pleural cavity

[1] I regret to find that a crude form of paraffin is sometimes employed in the manufacture of the gauze. It has the great disadvantage that it acts on the caoutchouc of the mackintosh cloth used in conjunction with the gauze, and soon makes it soft and useless. When pure paraffin is used the mackintosh will last for weeks together, and is thus in the long run very cheap, as well as perfectly trustworthy.

we should probably never be able to get it out again; and although it might perhaps lie there without causing disturbance, the occurrence is certainly one to be avoided. But in the course of a few days we found, as is usual in empyema treated by drainage, that the tendency of the thorax to contract on that side produced approximation of the ribs, so as to compress the india-rubber tube and interfere with the free flow of the discharge through it. We therefore substituted the metallic tube, about three-quarters of an inch long, long enough to go thoroughly into the pleural cavity, with a collar of metal to prevent it from slipping in, the tube being rounded at the end, with holes at the sides. It is sometimes the practice in Germany to cut away a piece of the rib in these cases to ensure free drainage. This I have not found to be at all necessary; the metallic tube, if used early enough before the ribs have got into contact, answers quite satisfactorily.

We have used carbolic acid in this case, although the child is only three years old. We have also in the hospital a child of only seven weeks, on whom I operated nearly a fortnight ago, on account of atresia aurium, and the head has since been kept enveloped in a carbolic-gauze dressing, without any interference with the infant's health. I mention these circumstances because I learned, to my great surprise, at Amsterdam lately, that it was considered by some surgeons an axiom that carbolic acid is so poisonous for young children that it should not be used for them at all; and I have since seen the same doctrine stated in print. Now, gentlemen, consider the circumstances of this little boy. In order to get a sufficiently large dressing on his small body, the carbolic gauze has been made to envelope his trunk from his armpits to his pelvis, and yet he has not suffered constitutionally at all; he has had no carbolic acid poisoning. This is sufficient to show that there is no need to abstain from the use of carbolic acid in young children from this fear. You may say, "How is it that we should not have carbolic acid poisoning, while some of our German brethren have it?" I believe the great secret of our comparative immunity from these toxic effects is that we avoid as much as possible all unnecessary action of the carbolic acid upon the tissues. Had I, for example, in this boy's case injected carbolic acid lotion into the pleural cavity, and done this at every dressing, as some persons might do, I think it is in the highest degree probable that he might have suffered from carbolic poisoning. Or, again, suppose the patient is not a child, but an adult, and suppose after making a considerable wound—as, for instance, in amputation of the thigh—you do as is often done on the Continent, viz., after stitching the edges of the wound together, and putting in drainage-tubes, inject a 1 to 20 carbolic acid solution with the syringe through the tubes. If I did such a thing as that, I should think it not at all unlikely that my patient might suffer from carbolic acid poisoning, because the interstices of the tissues just opened by the knife are ready to receive fluid that may be injected with any force towards them; and if you use a powerful syringe, and apply it to the orifice of a drainage-tube with the purpose of clearing out the wound, the cavity will probably be distended by the fluid, and there must be a great risk of having it forced into the interstices of the tissues, and thence passing in abundance by absorption into the circulation. This sort of practice is really quite unnecessary if you have a trustworthy spray, and operate so as to comply with the conditions of our physiological problem from first to last—conditions not difficult to comply with if we know that they are necessary, and keep a proper watch. And, again, in the changing of dressings there are many surgeons who, whenever they change the dressing under antiseptic treatment, make a point of syringing the wound out. There, again, is a most unnecessary application of carbolic acid to the system, and I believe the avoidance of this kind of practice is the principal cause of our immunity from

carbolic-acid poisoning. I cannot point to one single instance in which I can be sure that we have had carbolic poisoning of any moment whatever, either in my hospital or private practice during the two years I have been in London.

At the same time I do not deny that in rare idiosyncrasies there may be carbolic-acid poisoning in spite of the avoidance of needless introduction of the agent into the system. I have seen such a thing myself. I have seen, for example, after removing the mamma and dressing with the gauze, the patient begin to suffer, not only from dark urine, which is in itself a matter of no moment, but from general debility, loss of appetite, and other symptoms of carbolic poisoning. We changed the gauze dressing for one of boracic acid, and immediately the symptoms disappeared. We left this boracic dressing on for several days, and then changed it under the carbolic spray; and time after time, as the result of the mere application of the carbolic spray to a limited portion of that lady's integument, did the symptoms of carbolic-acid poisoning return in a few hours, making it indubitable that that particular individual had a special idiosyncrasy for being so affected.

Now it is very desirable that, if such an occurrence should show itself, we should be prepared with means of an alternative character. I have alluded to the boracic-acid dressing. This is very good with superficial wounds or sores, as you have had the opportunity of seeing strikingly exemplified lately in a case of skin-grafting.

[The large callous and foul sore, having been dressed for a few days with a moist boracic lint covered with a gutta-percha tissue, was purified completely by sprinkling the surface lightly with the powder of iodoform, after washing the surrounding epidermis with strong watery solution of carbolic acid. Prepared oiled silk (protective) dipped in boracic lotion was then applied to the sore, and covered with boracic lint overlapping well in every direction. A similar dressing of oiled silk and boracic lint was applied every third or fourth day, until the granulations had assumed thoroughly healthy characters, when skin-grafting was performed by shaving a thin slice about a quarter of an inch across, consisting of little more than epidermis, from the inner side of the upper arm, which had been washed with 1 to 40 watery solution of carbolic acid, cutting this into small pieces on the thumb-nail, and placing each, with the raw surface downwards, on the granulations, each graft being covered, as it was deposited, with a little bit of the oiled silk dipped in boric lotion. A general piece of the oiled silk rather larger than the sore was then applied, and over this boric lint in two layers secured with a bandage. This dressing was left untouched for a whole week, so as to allow the grafts a long period without mechanical disturbance. We all know how black and foul oiled silk would be if left for a much shorter time upon a suppurating sore without the use of an antiseptic. But here it was quite free from discoloration or odour, while every one of the nine grafts was found to have taken root, and cicatrization was proceeding at the margins of the ulcer with a rapidity that could not have been hoped for under water-dressing changed daily.]

But we should not like to trust this mild boracic acid for deep-seated affections like empyema. What substitute, then, have we in case of the rare occurrence of carbolic-acid poisoning? I believe the best at present known is salicylic acid, first introduced into surgical practice by Prof. Thiersch, of Leipzig. It may be used in the form of salicylic jute, which is a pretty cheap material. Some weeks ago my friend Professor Bennett, of Dublin, told me of a case of empyema which he had to treat in the country. Carbolic gauze was not obtainable, but he had salicylic jute; he used this after opening the empyema under the carbolic spray, and he directed the country practitioner to apply the salicylic jute at every dressing on the same principle, and the result was a rapid cure after

a course similar to that which you have been witnessing to-day. Here, then, we have evidence that in this exceedingly testing case, empyema, salicylic jute may answer the purpose as a satisfactory substitute for carbolic gauze. It must be applied in pretty large mass, and it will be well to have a piece of mackintosh outside, to prevent the discharge soaking directly through it.—*Lancet*, Dec. 20, 1879.

Hospital Notes.

Renal Abscess caused by a Fragment of Carious Vertebra Ulcerating into the Kidney and forming the Nucleus of a Renal Calculus.

A married woman, aged thirty-two, a music-hall dancer, was admitted into St. Mary's Hospital, Manchester, under the care of Mr. CULLINGWORTH, on May 9th, 1879, ten days after her ninth confinement. She had followed her occupation up to within seven months of her admission, to which date she referred the commencement of her present illness. For two years, indeed, she had occasionally felt pain in the left lumbar region after prolonged exertion, but about the time alluded to, after completing an unusually laborious engagement, she was seized with pain of a more severe character, and she presently noticed a swelling below the ribs, which, gradually increasing, led her to think she must be pregnant of twins. She suffered considerable pain in the left hypochondrium as well as in the back, and occasionally she felt the pain shooting downwards in the direction of the bladder. There was never pain during micturition, or any blood noticed in the urine, but during the last three months of her pregnancy the urine had been turbid, and since her confinement had smelt most offensively.

On admission she was looking pale, worn, and extremely ill. There was a distinctly fluctuating swelling anteriorly below the ribs on the left side, extending inwards nearly to the middle line, and downwards as far as the iliac crest. The percussion note over the swelling showed that there was bowel between it and the abdominal parietes. There was no lateral bulging but on the left side of the upper lumbar vertebræ posteriorly. There was another and much smaller swelling, in which fluctuation was not obtainable, but which communicated, on pressure, an indistinct impulse to the swelling in front. The patient endured constant and agonizing pain, and the swellings, particularly that in front, were exquisitely tender. The urine contained a large quantity of fetid pus. On two occasions an unusually large quantity of pus was passed, and each time the tumour temporarily diminished in size. The morning temperature varied from 99° to 100°, that in the evening from 101° to 102°. The pulse was usually about 110, sometimes rising as high as 130. There was obstinate diarrhœa, and the patient perspired profusely.

On May 30th the posterior swelling was aspirated, with no result beyond blocking of the needle with what the microscope showed to be a quantity of broken-down tissue.

On June 13th an incision one inch and a half long was made in the long axis of the posterior swelling. Immediately the skin was divided a quantity of reddish pultaceous material escaped, resembling what a fortnight before had blocked the aspirating needle. On passing in the finger, the transverse processes of the adjacent vertebræ were felt to be exposed and roughened from caries, and the lumbar muscles were found entirely disorganized and pulpified. At a depth of three inches from the surface a tense membrane was reached, evidently the poste-

rior wall of the fluctuating tumour in front. Twelve ounces of fetid pus were withdrawn by the aspirator. The opening was then enlarged by means of a probe-pointed bistoury, the abscess explored, and two calculi removed with the aid of a small lithotomy-forceps. The cavity was syringed out, a drainage-tube inserted, the wound dressed with tenax, and the patient removed. She never rallied, and died on the third day.

Necropsy, twelve hours after death.—The left psoas muscle was almost completely disintegrated, the small portion remaining being closely adherent to the left kidney. The left transverse process, and the left side of the body of the second lumbar vertebra, had disappeared, and the tips of the left transverse processes of the first and third lumbar vertebræ were also implicated in the caries. The left kidney and ureter were enormously enlarged, and the pelvis of the kidney had become a distended suppurating cavity, which had been opened and partially emptied through the incision made posteriorly during life. At the bottom of one of the dilated calyces lay a calculus of the size of a half marble. The kidney itself was riddled with abscesses, and at its posterior and inner aspect, where it had been in close contact with the vertebral column and bound down to it by strong adhesions, there was an ulcerated opening permitting free communication between the diseased vertebræ and the interior of the kidney. There was no evidence of peritonitis or other morbid condition.

The largest of the three calculi was of a light colour and an extremely angular and irregular shape. At its centre, where it was bent at a slightly obtuse angle, was found a small nucleus of carious bone, and around this a layer of oxalate of lime, while the outer portions of the calculus consisted of phosphate with some admixture of carbonate of lime. The two smaller calculi, of which the one removed during life was about equal in size to a Calabar bean, were of a darkish-red mottled colour, and possessed a smooth surface. They were found on analysis to consist of phosphate and carbonate of lime. The weight of the largest calculus was 5.8 grammes, and that of the two smaller 1.87 grammes and .47 gramme respectively.

Remarks.—The sequence of pathological events in this case was unusual and interesting. It seems reasonable to suppose that the first morbid process was caries of the lumbar vertebræ, and that this was accompanied with chronic inflammation of the adjacent tissues, producing, in the case of the psoas muscle, disorganization, and in the case of the kidney, firm adhesion of the capsule to the vertebral column. A small portion of necrosed bone appears then to have made its way by ulceration through the substance of the kidney into the pelvis of that organ, where it became the nucleus of a calculus of considerable size, and the exciting cause of the formation of two smaller calculi. The patient's vocation as a public dancer would no doubt intensify the irritation produced by the presence of these calculi, the ultimate result of which was pyelitis, destructive suppuration, and death.—*Lancet*, Jan. 3, 1880.

MONTHLY ABSTRACT.

Anatomy and Physiology.

Localization of Function in the Cerebrum.

M. JACCOUD, in the *Gazette Hebdomadaire*, relates two cases which he is of opinion tell against the view that there are separate centres in the cerebrum. The first case is that of a man, aged forty-two, with suppurative meningitis. The right hemisphere was very hyperæmic, but presented no adhesions of the menin ges, but the pia mater of the left hemisphere was infiltrated with pus, especially in the region of the central convolutions and central sulcus. The pia mater was adherent over the two upper thirds of these convolutions. During the last two days of life, the patient suffered from convulsions of the left side of the body, but there was no hemiplegia. M. Jaccoud sees in this case an example of unilateral convulsions in consequence of a stimulating lesion of the motor region of the same side. The subject of the second observation was a woman, aged eighty-three, who survived two days after an attack of apoplexy, and during this period suffered from hemiplegia of the right side, with anæsthesia. Speech was not disturbed, and death was the result of advanced phthisis pulmonalis. The left hemisphere was intact; the right presented an extensive flattened hemorrhage between the dura mater and the pia mater, covering the upper border of the hemisphere; so that the central sulcus was about its middle. No other lesion was visible. M. Jaccoud refers the hemiplegia in this case to compression of the upper parts of the central convolutions, but mentions also its occurrence on the same side.—*Lancet*, Jan. 3, 1880.

Influence of Sweating on the Digestive Power of the Gastric Juice, and on the Acidity of the latter and the Urine.

A paper, by M. SASSECKI, contains the results of his investigations into this subject. His experiments were undertaken with a view to ascertain whether gastric juice and sweating stand in similar relation to each other as gastric juice and urine, *i. e.*, whether the acidity of the two remaining fluids decreases, if one of the three acid fluids (gastric juice, sweat, and urine) is either eliminated or neutralized. This view is supported by the fact that individuals who perspire much frequently suffer from dyspepsia. M. Sassecki has made 63 experiments: 48 on patients, and 15 on healthy people, and has come to the following conclusions: (1) Sweating decreases the digestive power of the gastric juice. (2) The acidity of the gastric juice is decreased. (3) Both the absolute and relative acidity of the urine is also diminished. (4) The stronger the perspiration, the more the digestive power and acidity of the gastric juice are lessened, as well as the acidity of the urine. These results suggest other questions. Would it not be possible to increase the acidity of the gastric juice and the urine by diminishing the secretion of the skin and the perspiration, viz., by atropin? Do not dyspeptic patients, or at least those among them in whom dyspepsia is caused by want of acidity in the gastric juice, suffer from frequent sweats? Should it not be possible to increase the acidity of the gastric juice, the secretion of the skin and perspiration, by rendering the urine alkaline by means of a vegetable diet? —*London Med. Record*, Dec. 15, 1879.

Materia Medica and Therapeutics.

Aconitia.

Dr. OULMONT, Physician to the Hôtel Dieu, terminates a memoir on aconitia, which he presented to the Académie de Médecine (*Gaz. des Hôp.*, Nov. 25) with the following considerations: It is a well-defined medicinal agent, which acts on man in a regular and certain manner, but which, on account of its energy, should only be employed in very small doses at long intervals. Frequently neuralgias are accompanied by well-marked intermittent and periodic accidents, to combat which quinine should be added. The important point, both for patient and physician, is to be able to rely upon a pure and unchangeable medicinal agent which is always identical in its composition and very scrupulously dosed. It is in order to attain this end that Dr. Moussette has prepared his pills, each containing very exactly a fifth of a milligramme of crystallized aconitia and five centigrammes of pure quinine. In consequence of the energetic action of the aconitia, the susceptibility of the patient should be tried by only commencing the first day with three pills—one morning, midday, and evening. If on the first day no marked sedative action is obtained, we may gradually augment the dose by a pill per diem until six are taken in the twenty-four hours, at which dose we should remain until the pain is subdued, only going beyond it in exceptional cases. If a little diarrhœa comes on, the dose should be diminished. To sum up, physiological investigations and clinical observations conducted in the Paris hospitals have demonstrated that the sedative action exerted by Moussette's pills on the circulatory apparatus, through the medium of the vaso-motor nerves, indicates their employment in neuralgia of the trifacial, congestive neuralgias, and in rheumatic, painful, and inflammatory affections. etc.—*Med. Times and Gaz.*, Dec. 6, 1879.

Anæsthesia by a New Method.

One of the most remarkable discoveries of the age is that attributed to Dr. PAUL BERT, the Professor of Physiology at the Sorbonne, which consists of producing anæsthesia by a mixture composed of nitrous oxide or laughing gas and oxygen, which has already rendered signal service in the practice of surgery. Pure nitrous oxide has for a long time been employed for the minor operations in surgery, particularly for the extraction of teeth; but the period of anæsthesia is extremely short; and the asphyxia, though momentary, has sometimes been attended with fatal results. M. Paul Bert conceived the idea of preventing the asphyxia thus induced, preserving at the same time the anæsthetic properties of the nitrous oxide, by mixing it with oxygen, which he afterwards verified by experiment. He then came to the conclusion that, if anæsthesia were not produced in this case, it was owing to the gas not having its normal tension, and to its not being absorbed in sufficient quantity. This led him to try the mixture in a chamber of compressed air, which he extemporized for the purpose; and the success of the experiment far exceeded his expectations. The following is the process, which was lately communicated to the Therapeutical Society of Paris by M. Limousin, a very enterprising pharmacien. The gaseous mixture is effected in the proportion of 85 parts of nitrous oxide and 15 of oxygen; and generally it is administered under a pressure of 17 centimetres of mercury, which would represent, at the normal atmospheric pressure of 76, a total pressure of 93 centimetres. The tension of the nitrous oxide is, therefore, $\frac{85 \times 93}{75} = 105.4$; that of the oxygen is $\frac{15 \times 93}{75} = 18.6$; a proportion a little too strong for the former, and a little

too weak for the latter. Nevertheless, anæsthesia was produced without asphyxia. The nitrous oxide is prepared from the nitrate of ammonia; and the oxygen is produced by decomposing, by the aid of heat, a mixture of chlorate of potash and the peroxide of manganese. The two gases are introduced into balloons of caoutchouc or vulcanized India-rubber, in the proportions indicated above; and the dose is regulated by a small gasometer similar to that employed by the Gas Company of Paris. The balloons are united by means of India-rubber and glass tubes, in such a manner that the gas enters a small intermediate balloon, which serves as a regulator, and is provided with two tubes. The mixture is then administered by means of the well-known apparatus invented by Clover. The quantity of gas expended amounts to about ten litres per minute; hence it would require a large supply for a long operation, which is a great drawback, as it involves the necessity of using balloons of some size, which would encumber the chamber of compressed air, the space in the interior of which is already rather limited. This drawback would render the application of the process most difficult in the great operations, as it would take up a great deal of space, and necessitate the employment of a certain number of assistants. Yet, notwithstanding these inconveniences, the new anæsthetic process will doubtless be used when and wherever practicable; and Drs. Léon Labbé and Péan, the former of the Lariboisière Hospital, and the latter of St. Louis, have resumed their experiments at their respective hospitals, which were interrupted by the summer holidays. During the last half of October, M. Labbé performed eight operations under the new process, and with perfect success. The operations, which were varied in their character, were performed in the movable bell or chamber of compressed air organized by Dr. Fontaine for medical as well as for surgical purposes. One operation—removal of a cancerous breast—lasted sixty-four minutes, without any injurious influence on the patient; and this would lead to the hope that the larger operations—even ovariotomy—may also be performed without any danger. The following are the advantages of the new process: uniform dosage of the anæsthetic agent; suppression of the stage of excitement during the operation, and of vomiting after it; rapid return of sensibility, etc. MM. Labbé and Péan have arranged to avail themselves of Dr. Fontaine's movable *cloche;* the former on Tuesdays, at the Lariboisière, and the latter on Thursdays at the St. Louis Hospital. Dr. Fontaine is the founder of the Aërotherapic Establishment in the Rue Chateaudun.—*British Med. Journal*, Dec. 6, 1879.

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On the Hypnotic Value of Lactic Acid and Lactate of Soda.

Dr. DARIO MARAGLIANO publishes the results of a series of observations on this subject in the *Rivista Sperimentale di Freniatria e di Medicina Legale*, anno v, fasc. 3, 1879. The patients experimented upon were mostly quiet melancholiacs with obstinate insomnia. The acid was tried forty-nine times, and the salt twenty-six times. In twenty-five cases, lactic acid was given by the mouth in quantities of from one and a half to three drachms, with water and syrup; in none of these was there any beneficial effect. In sixteen cases, from one and three-quarters to two and a half drachms were given in the same way about an hour before supper; in only two of these (dose, one and three-quarter drachms) was the drug inert; in the other fourteen cases the patients went to sleep directly after going to bed, and slept until the morning. In eight cases, from two to three drachms of the acid, dissolved in water, were administered as an enema, sometimes before and sometimes after supper, but without producing any beneficial result. Lactate of soda (from two to four drachms, in six ounces of water, in divided doses), given in twelve cases after supper, produced no lasting sleep.

From two to two and a half drachms given before supper in four cases, gave equally uncertain results. Sound and lasting sleep was caused in four cases in which three or four drachms of the salt were given by the mouth an hour before supper, and consequently upon an empty stomach. The same quantity administered, *per rectum*, in six cases, caused no sleep whether given before or after supper. Both the acid and the salt were tried in three cases suffering from constant excitement and restlessness; they were administered under the most favourable conditions as indicated by the results given above, but produced no effect whatever; later on, one centigramme of morphia was added to the usual dose, but equally without result; two centigrammes of morphia, injected subcutaneously, in two of these cases, gave good results. The author's conclusions are these: 1. Lactic acid, in doses of two to two and a half drachms, and lactate of soda, in doses of three to four drachms, given to quiet lunatics by the mouth, on an empty stomach, three or four hours before bedtime, are efficacious in producing sleep. 2. These drugs have no effect when the insomnia is accompanied by great agitation and excitement. 3. Lactic acid and small doses of morphia, when administered together, do not mutually enhance one another's effects as has been stated to be sometimes the case. 4. The use of lactic acid and its salts as hypnotics for quiet lunatics is not to be preferred to that of those commonly employed at present (*e. g.*, chloral and morphia), on account of the following disadvantages: tardy action, the gastro-enteric disturbances which they produce, and their greater costliness. Dr. Maragliano's experiences in the use of these drugs quite confirm previous observations as to their very harmful effects upon the alimentary system. —*London Med. Record*, Dec. 15, 1879.

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On a Combination of Chloride of Ammonium with Iron.

Professor T. Grainger Stewart (*Practitioner*, August, 1879) in drawing attention to a certain condition which often arises in cardiac affections (particularly aortic disease), demanding for its treatment large doses of iron, states that, in some cases, both belonging to the above groups and of other kinds, the reception of iron by the system is greatly facilitated if chloride of ammonium be administered along with it. The form of iron he finds best is the tincture of the perchloride; to this he adds chloride of ammonium, in doses of half a grain to each minim. He maintains that in cases in which iron, if given alone, causes dyspepsia, the latter is relieved by the combination described, and the patient is enabled to bear large doses of iron for a considerable time.—*London Med. Record*, Dec. 15, 1879.

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Intravenous Injection of Milk and of Sugar.

In a paper, giving to the Société de Biologie (*Gaz. Med.*, Dec. 6) an account of a series of experiments which they have undertaken, Drs. Moutard-Martin and Charles Richet arrive at the following conclusions: 1. Injection of a large quantity of milk kills by bulbar anæmia. 2. The introduction of the lactic ferment into the veins of an animal seems to produce no effect. 3. Injection of concentrated solutions of sugar kills by bulbar anæmia. 4. Milk injected into the vascular system produces no immediate action, either on the pulmonary circulation, on muscular contractility, or on the vitality of the cerebral nervous centres or the nerves. 5. Sugar injected into the veins is rapidly excreted by the urine, and induces an intense polyuria and an abundant intestinal secretion. 6. The symptoms ensuing on large injections of milk are vomiting, polyuria, movements of deglutition, and later, sharp cries, disturbance of the respiratory innervation, contraction of the muscles of the limbs, and arrest of the action of the

heart. 7. At the autopsies of animals killed by the injection of milk or sugar, there is found very marked intestinal injection, and subendocardiac ecchymoses are of *constant* occurrence. 8. In a therapeutical point of view the injection of milk is a useless and dangerous operation, and one which should be absolutely proscribed.—*Med. Times and Gazette*, Dec. 13, 1879.

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On Menthol as an Antineuralgic.

Mr. A. D. MACDONALD extols the virtues of this substance, which is a volatile solid obtained from Chinese or American oil of peppermint, as a remedy in the various forms of neuralgia. The solution he uses is the following: Menthol gr. j; spt. vini rect. ℥j; olei caryoph. ℥x; mix. To be shaken and painted over the affected tract. Pain is in this way relieved in from two to four minutes, and within a minute or two more the attack ceases. In toothache, the author has cleaned out the cavity of the tooth with a little cotton-wool, and then placed a single crystal on another small piece of wool and inserted it, with the result that the pain instantly disappeared. A tincture of the strength 1 in 50 is equally effective. Mr. Macdonald recommends menthol as a suitable external application in sciatica, intercostal neuralgia, and brachialgia.—*London Med. Record*, Dec. 15, 1879.

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Vaseline in Gynæcological Practice.

Dr. SINETY, in *Le Progrès Méd.*, Nov. 29, calls attention to the value of this substance, in place of fatty substances, glycerine, soap, etc., for facilitating the introduction of the finger, speculum, or other instruments, and as an excipient for medicinal substances when applied to the os uteri. In place of using simple vaseline he prefers combining it with carbolic acid (one part to fifty of vaseline No. 1) in order to obtain disinfective properties when applying it to the finger, instruments, etc. Medicinally, iodine, iodide of potassium, belladonna, etc., may be applied by its agency.—*Med. Times and Gazette*, Dec. 6, 1879.

Medicine.

On the Treatment of Typhoid Fever.

The following address on the treatment of typhoid fever was delivered by Sir WILLIAM JENNER before the Midland Medical Society at Birmingham, and is an able and elaborate statement from one who is recognized as the highest living authority in Great Britain on the subject of which it treats.

After acknowledging the honour of the invitation to address the Society, Sir William Jenner said:—

Though I have nothing new on the matter to bring before you this evening, and have therefore in some measure to pray your pardon for occupying so much of your valuable time in the enumeration of common truth, I still think myself justified in selecting the Treatment of Typhoid Fever for my paper to-night—(1) because of the intrinsic importance of the subject; (2) because some of the questions concerning the treatment of typhoid fever are considered by many to be still undecided; (3) because not only have I had, for a longer period, probably, than any of my hearers, much experience in the treatment of the disease, but I have also had during later years frequent opportunities of myself seeing the results of various modes of treatment as practised by others; (4) because, although

I have written much and often on the etiology and pathology of the disease, I have never publicly expressed any opinion or written a line on its treatment.

In so complex a disease as typhoid fever—the mortality and symptoms of which vary not only with the age, habits, and family constitution of the patients, but also with the dose and mode of access to the system of the poison, the conditions which precede and those which accompany the disease during its incubative period and its earliest development, the epidemic constitution, the date at which the disease is first treated, and the early management of the patient; it is scarcely possible to find two cases in all respects identical, and quite impossible to collect records of a sufficient number of cases practically identical to determine by numerical analysis the best mode of treatment. And even of the specially prominent symptoms—*e. g.*, temperature, rapidity of pulse, diarrhœa—each one may owe its origin to such different pathological conditions, and it is so often impossible to determine in any given case to which of these several conditions it is due, that in the *present state* of pathological knowledge it seems to me that it is impracticable to determine otherwise than by the opinions formed by individuals from personal experience, what are the best means to be employed in the treatment, not only of typhoid fever itself, but also of each symptom, and how and under what circumstances each remedy should be employed. I do not in the least degree under-estimate the immense importance of numerical analysis for arriving at truth on medical subjects; and if it were possible to find the value of the several remedies proposed for the treatment of typhoid fever, or of its symptoms, by numerical analysis, the results of such an analysis would be real steps in our knowledge, for facts would replace opinions, and doubts in regard to the influence of remedies be impossible. Each special act of treatment would then be based on firm grounds, instead of being, as it now is, an experiment performed by the medical attendant. The sum of his own experiments constitutes each man's experience, to which, in proof of the correctness of his practice, he appeals as to a judge whose decision is final and infallible. And yet how different are the conclusions, all based on experience, drawn by different observers in regard to the effects on any given disease or symptom of any given remedy. The physician orders a drug or a stimulant, or employs a bath; and then, according to the credulous or sceptical tendency of his mind, his experience in the special disease he is treating, his knowledge of its natural course and history, his powers of observation, and the general soundness of his judgment, the *post hoc* is, in his opinion, a mere *post hoc*, or a veritable *propter hoc;* and the remedies he employed have been, in his opinion, of little consequence, or all-important; and so he builds up his experience on treatment. And the difficulty of building up treatment by the accumulation of the experience of many men, expressed in their opinions merely, is enhanced by the fact that, even when the conclusion is correct, the good effect following the administration of the drug is a veritable *propter hoc;* it is for many men an impossibility to follow or define for themselves, much more describe to others, the several steps, in the mental analysis of the facts before them, they have performed in arriving at their correct conclusion. Some men appear to be capable of performing this delicate mental analysis correctly without being able to follow the steps of the analysis in their own minds; they are no more capable of following their own mental efforts, or of telling another how they arrived at their correct conclusion, than are those children who solve complex arithmetical problems in a few seconds without themselves knowing by what steps they pass from the premises to the conclusion.

Believing, however, notwithstanding all these sources of serious error, that in the present state of pathological knowledge it is impossible to fix the treatment of typhoid fever on a more sure basis than individual opinions founded on expe-

rience, I propose to describe what my experience has taught me to be the most successful methods of treatment of the disease, and also of some of the symptoms which by the severity they may attain cause grave discomfort to the patient, or place his life in danger. I shall limit myself to those symptoms which may be considered to be the natural manifestations of the disease, for time will not permit me to pass even briefly in review all the symptoms common in the disease or the complications, although the patient often succumbs to these symptoms and to these complications.

To give a clear view of the treatment of these symptoms, I shall be obliged to refer to the pathological conditions in which they severally originate.

I have never known a case of typhoid fever cut short by any remedial agent—that is cured. The poison which produces any one of the acute specific diseases (to which order typhoid fever as much as smallpox belongs) having entered the system, all the stages of the disease must, so far as we know, be passed through before the recipient of the poison can be well. If the patient can be kept alive for a definite time the specific disease ends, and then, if no local lesion remains to constitute a substantive disease, the patient is well. The treatment of typhoid fever is essentially rational. To treat a case with the best possible prospect of success the physician ought to be acquainted with the epidemic constitution of the period, the etiology of the disease, its mode of attack, its natural course, the order of appearance, and the natural duration of each of its symptoms, the way in which each symptom influences the termination, the several pathological lesions which produce or may produce each special symptom, and the complications to be watched for at each stage of the disease.

Certain facts have to be kept in mind when treating a case of typhoid fever, and when estimating the effect of remedies: First, that the disease, in the majority of cases at least, is produced by the action of a small portion of the excreta from the bowel of a person suffering from typhoid fever; that air from a drain, or air blowing over dried feculent matter, may convey the poison to the patient, or his own fingers may carry it to his mouth, or that the vehicle for the poison may be a fluid—for example, water or milk; and that the poisonous properties of the excreta may be destroyed by boiling the fluid in which they are contained, though not by filtering the fluid. Secondly, that the natural duration of a well-developed case of typhoid fever is from twenty-eight to thirty days. Hence subsidence of the fever before that date should be regarded with suspicion, and the patient not treated as if the specific disease had ended, while the continuance of febrile disturbance after that date should lead to repeated and most careful examination of the patient, in order to ascertain if any local lesion is keeping up the febrile excitement. But not only is the duration of the specific disease limited, but the prominent symptoms have their regular order of sequence, and several their own natural limits of duration—that is, a time to begin and a time to end; and the natural termination of a symptom has often been attributed to the remedial agent last employed.

On what part of the system the poison exerts its earliest influence, whether on the agminated glands or on the nervous system through the blood, must in the present state of our knowledge be doubtful; but that by the time the first symptoms of the disease occur the nervous system and the agminated glands of the small intestine are both seriously affected there can be no question. That the nervous system suffers at the outset is shown by the headache and the general nutritive disturbance—*i. e.*, by elevation of temperature and loss of weight, due to waste of the tissues generally, and by the arrested or disturbed secretions generally; and that the agminated glands also suffer from the outset is shown by the pain in the abdomen and deranged action and secretion of the bowels, and also

by rare post-mortem examination made within a few days of the beginning of illness.

In the earliest stage of typhoid fever the patient is prone to commit certain mistakes in treating himself, either of which may add greatly to the severity of the coming illness. (1) He may think that he has a common cold in his limbs, as it is called, and try to throw it off by strong exercise. A certain sense of weakness accompanies this early stage of the fever, but it is rarely so great as to prevent the patient, if stimulated by strong will, walking long and briskly. (2) He may consider that he is suffering from biliary derangement, and attribute to this the headache, disturbed nights, sense of malaise, want of appetite, and disordered bowels, and take a dose of drastic aperient. (3) He may think the weakness he feels is to be removed by food and wine. A dose of medicine, he says, cannot hurt; bed, he thinks, weakens; and food and wine, he knows, restore strength; therefore he prescribes a dose for himself which irreparably injures his bowel; he takes exercise which increases the waste material in his system, and he loads his stomach with food it cannot digest and stimulants which heighten the fever and disturb the action of the eliminating organs, and then pays the penalty, perhaps with his life, for the errors his ignorance has led him to commit.

The thermometer saves, or ought to save, the physician from the patient's mistakes. The temperature having rendered it even *possible* that the ill-defined and may be trifling symptoms are due to the poison of typhoid fever, the patient should be absolutely confined to bed. Exercise or fatigue immediately before or after the absorption of the poison, and especially when the action of the poison is manifesting itself, increases the gravity of the disease, partly by exhausting the nervous power, but chiefly, I think, by causing destruction of tissue, and so the presence of waste material in the system on which the poison can act; and at the same time, by disturbing the action of the eliminating organs, it leads to the retention in the system of the products of the destroyed tissue.

Some of the worst cases of typhoid fever I have ever seen have appeared to me to owe their gravity to the patient having travelled, after the commencement of the sense of illness, in order to reach home. I very rarely advise a patient's removal to his home, if that be distant, so satisfied am I that the fatigue of travel, whether by rail or carriage, tends to make what would otherwise have proved a mild case severe, and to cause a bad case, which might after perhaps a struggle have ended favourably, to terminate in death. Not only is other tissue-destruction than that due to the fever process in a great degree prevented by rest in bed, but the nervous system is there less liable to disturbance, any tendency to moisture of skin is favoured, the elimination of the products of waste tissue is unchecked, and chances of error in diet diminished. The air of the room should be as pure as possible; the room in which the patient is placed be large enough to permit it being freely ventilated without draughts; if possible, the patient should occupy a different room at night from that used in the day.

From the first the patient should be restricted to liquid diet, with farinaceous food, and bread in some form if the appetite requires it. It is better to vary the broths, and to add to them some strong essence of vegetables. Sometimes a little strained fruit juice is taken with advantage, but skins and seeds of fruits and particles of the pulp are frequent sources of irritation of the bowel. Grapes are always dangerous from the difficulty of preventing the seeds slipping down the throat. The value of milk as an article of diet in fever is generally admitted, but it requires to be given with caution. The indiscriminate employment of milk in almost unlimited quantities as diet in fever has led to serious troubles. Milk contains a large amount of solid animal food. The casein of the milk has to pass into a solid form before digestion can take place. Curds form in the stomach,

and, the digestive powers being weakened in fever, these curds may remain unchanged in the stomach, and produce considerable disturbance of system.

I have seen the patient restless, sleepless or drowsy, his temperature raised several degrees above what it had previously been, vomit, eject a quantity of curd, and at once the restlessness cease, the temperature fall, the skin became moist, and the patient drop into a quiet sleep. All the threatening symptoms vanish with the ejection of the offending material. Or the undigested curds may accumulate in the bowel, inducing flatulent distension and pain in the abdomen, restlessness, and increased febrile disturbance. Under these circumstances, I have seen an enema of thin gruel bring away a large vesselful of offensive, sour, undigested curds. Or, again, the undigested curds may themselves (and this has not been an uncommon consequence of milk diet in my experience) irritate the bowels, and produce, keep up, or greatly increase diarrhœa. A distinguished chemist once remarked to me, "Do not forget that a pint of milk contains as much solid animal matter as a full-sized mutton-chop;" and solid the casein of the milk must become before it can be digested; and yet I have known a patient drink two quarts and even more of milk in twenty-four hours—*i. e.*, solid animal food equal to four mutton-chops. Can anything approaching to such an amount of solid animal food be digested, and, if it could, is such an amount of animal food good for a patient suffering from typhoid fever? He is weak because of the presence of the fever, and not from lack of food.

Patients suffering from typhoid fever should be allowed an unlimited supply of pure water. When pure water is freely absorbed, it passes away by the kidneys, skin, lungs, etc., and is of much service as a depurating agent. If it be *possible*, even, that the poison of the fever was conveyed into the patient by the drinking-water or the milk of the district in which he is ill, then these fluids should be boiled till a different supply is obtained. All sources of foul air from drains or cesspools should be sought for, and the air the patient breathes be freed from all possibility of impurity; disinfectants should be placed in the close-stool, and the dejecta buried if possible. If the bowels are confined in the early stage of the disease a simple enema should be given. Hard stool retained in the bowel will produce irritation, and it may be catarrhal inflammation of the intestinal mucous membrane, and so induce troublesome diarrhœa. Small doses of mineral acid, well diluted, are grateful to the patient, and may perhaps be useful.

The fever is thus met by rest, quiet, fresh air, mixed liquid food and bland diluents, and the exclusion of fresh doses of poison; the intestinal lesion by the careful exclusion from the diet of all hard and irritating substances, and the removal from the bowel of any local irritant.

Frontal headache and sleeplessness are two symptoms of the early stages of typhoid fever which may cause the patient much distress. The headache is in some cases alleviated by cold and in others by warm applications; but as the headache ceases spontaneously in about ten days from the outset of the fever, no active treatment is required for its cure. Local applications, the exclusion of light from the room, and absolute quiet, have been all the means I have seen necessary for its relief. Sleeplessness is a more important symptom, for although it also usually disappears or diminishes spontaneously during the second week of disease, still this is not invariably the case; and the nervous system may be greatly worn by the want of sleep, lasting as it does occasionally, unless treated, night and day. The drugs I employ when, from the continued sleeplessness, it seems absolutely necessary to relieve it, are henbane, bromide of potassium, and chloral. From a combination of the latter I have seen very good results, and, so far as my experience has gone, no really ill effects when its use has been limited to the earlier stages of the disease—*i. e.*, to the period anterior to signs of nervous pros-

tration. If the patient's temperature be high, a tepid bath or sponging the surface will often at once induce sleep, and no drug be required. In the earlier and also in the later stages of typhoid fever the sleeplessness has been treated by opiates. Experience has convinced me that although, in some cases, opium in sufficient dose to secure sleep has afforded relief, it is on the whole a most dangerous remedy. In the early stage of fever it disturbs digestion and checks secretion. In the later stages of the disease I have seen several cases fatal from its influence on brain, heart, and secreting organs. To my mind, the hoped for and occasionally attained good is altogether outweighed by the disproportionately possible evil and occasionally fatal effect resulting from the administration of direct sedatives, opium and chloral, in the later stages of fever.

Changes in the agminated glands are present from the earliest period of the disease, and to these progressing changes in Peyer's patches, in the mesenteric glands corresponding to the patches, and to the disturbances in the intestinal secretion and action consequent on these changes, the abdominal pains and laxness of bowels proper to the fever are due. So long as disease is limited to the specific changes in question there is probably little diarrhœa, but as local disease progresses catarrhal inflammation of the mucous membrane supervenes, and when this is extensive the stools become frequent, liquid, and more or less copious.

The changes preceding the ulceration, and the ulceration itself, of Peyer's patches are specific in nature, as much so as is the eruption on the skin; and there are no drugs or other means of arresting or limiting these specific processes. But over the diarrhœa which usually accompanies these processes in their progress we can, in many cases, exercise a decided influence.

The chief causes of diarrhœa in excess of that due to the intestinal specific changes in typhoid fever are: 1. Error in diet—*e. g.*, the use of solid food; the presence of particles of undigested food in the bowel, the abuse of milk, pure animal broths. My own experience has not satisfied me that one animal broth is more prone to produce diarrhœa than another. Excess of fluid, when there is inability to absorb the quantity drunk, passes through the bowel, and so simulates excessive secretion from the intestinal mucous membrane. 2. Catarrhal inflammation of the mucous membrane and irritability of the bowel. These conditions are frequently the consequence of, or are greatly increased by, the unhealthy intestinal secretions and contents, evidenced by their ammoniacal and especially offensive odour and strong alkaline reaction, and by the passage through the bowel of undigested food, whether liquid or solid. So long as the stools do not exceed three to five of moderate quantity in twenty-four hours, the looseness of bowels is rather advantageous than injurious; but when, from their number or from their quantity, there is risk of the strength of the patient being reduced to a dangerous degree, then it becomes necessary to restrain the diarrhœa. The treatment varies with the pathological condition which induces the diarrhœa. It is often sufficient to examine the stools to detect the cause and remove it—*e. g.*, curds of milk. Inquiry may prove the great excess of the fluid taken into the stomach over that passed by kidneys and skin. When the stools are strongly alkaline diluted sulphuric acid sometimes affords marked relief. When the stools are merely frequent four ounces of starch water thrown into the rectum night and morning will often check the frequent action. Should this not prove efficacious from three to ten drops of laudanum in one ounce and a half of starch water may be thrown into the bowel night and morning *after* the passage of the stool. When very offensive, correctives of fetor should be given; a teaspoonful of charcoal may be given two or three times a day. Under its influence I have seen the stools lose their fetor and ammoniacal odour, become less liquid, and in many cases the irritation from the catarrhal inflammation of the mucous membrane diminished. The greatest

possible care should be taken that the charcoal is an impalpable powder; animal charcoal has, in this respect, some advantages over vegetable. Other correctives of fetor, or antiseptics, will have as good effect as charcoal, but this has given me such satisfactory results that I have not resorted to other remedies of its class.

Carbonate of bismuth, in twenty-grain doses every four or six hours, is one of the best remedies I know for the catarrhal inflammation of the bowel itself. If the fluid poured out be very excessive, then a vegetable astringent, as catechu and kino, may be given with the bismuth, and, should these means fail, three to five drops of laudanum must be added to each dose of the mixture. The use of opium, even in this dose, by the mouth, should be avoided if possible, as, by interfering with the action of excreting organs, and by its other effects on the nervous system, it may do more harm than the symptom for which it is prescribed. The administration of opium should if possible be limited to the bowel.

In place of being relaxed, the bowels are occasionally confined. Inaction of the bowels in typhoid fever may be due to torpidity of the large bowel, with free absorption of the fluid contents or diminished secretion of fluid by the mucous membrane of the bowel. Under these conditions the stools become even hard and dry, and, if long retained in the bowel, may produce considerable irritation, and even catarrhal inflammation, of the mucous membrane of the bowel, with diarrhœa.

At the same time that solid stool accumulates in the rectum and colon, which may require removal, there may be extensive or deep ulceration in the ileum. A small-sized enema of thin gruel, repeated every other day if necessary, is safer than a large enema at longer intervals. Laxatives, however mild, by the mouth, are liable to irritate the ulcerated surface of the bowel, and, if sloughs are separating, may forcibly hasten the detachment, and so produce hemorrhage and turn the scale between recovery and death.

The most important, and a not unfrequent, cause of inaction of the bowel in typhoid fever is *deep* ulceration of one or more Peyer's patches. Large superficial ulcers favour the occurrence of diarrhœa, and are often accompanied by catarrhal inflammation of the mucous membrane. A single *deep* ulcer will paralyze the action of the bowel, and so cause constipation, and this has to be kept in mind as a fact of the highest practical importance when it is proposed to relieve the bowels by an aperient. A deep ulcer is usually produced by the separation of a deep slough, and is often unattended by any catarrhal inflammation of the small intestine, or by any affection of the large intestine.

In all cases of typhoid fever there is some distension by flatus of the abdomen—the belly is more or less blown. The distension is sometimes so great as to interfere with the free play of the diaphragm, and so, by preventing the full expansion of the lungs, favour congestion of those organs and impede the circulation. Fluid will run through the bowels with little effort; air requires expulsion. Excess of flatus in the bowels may have its origin in deficient power of expulsion or excessive generation of gas. Sufficient paralysis of the bowel to cause accumulation of flatus may be the result of loss of nerve energy, or of local injury of the bowel. A single *deep* slough-formed ulcer will paralyze the action of the bowel, and lead to such an accumulation of flatus as produces enormous distension of the abdomen; the weaker the abdominal muscles the greater, *cæteris paribus*, the accumulation of flatus. Want of power to expel the flatus, and excess in the quantity formed, reach their maximum as a rule about the latter half of the third and during the fourth week of the fever, for then the sloughing and ulcerative processes of the walls of the intestine are at their height, the nerve-power is at its lowest, and the contractile energy of the abdominal and intestinal muscles is consequently at its minimum; while, from the state of the stomach and the secreting glands generally, the antiseptic digestive processes are in a great degree arrested, and the food that

finds its way into the intestines mingling with the fetid secretions from the diseased intestines, and with the sloughing particles separating from the solitary and agminated glands and from the floors of the ulcers, readily undergo gas-generating decomposition. Of all the remedies proposed for the relief of flatulent distension of the abdomen, turpentine applied externally is the most extensively employed in practice. Now I must say, with reference to the external application of turpentine, that I have never seen a diminution of the distension which seemed to me to be *propter hoc*.

The brief outline I have sketched of the pathological conditions causing the distension gives the key to what has seemed to me to be its most successful treatment. If the stools be fetid and the distension is in part due at least to the excess in the gas formed, then to destroy this fetor and to arrest putrefaction and gas-generating decay of the contents of the intestine is for me the first object. Charcoal has proved a most efficient agent for effecting this purpose. It is of importance to select as food substance which leaves no solid residue to undergo decomposition in the intestine. The administration of pepsin and acid at the same time as the food, and also the partial digestion of the food before it is taken, is often advantageous. The large intestine is occasionally so greatly distended as to lose from stretching its contractile power; the introduction of a long tube into the bowel, and the mechanical removal of some of the gas, will occasionally be sufficient to enable the bowel to regain some of its contractile power. Alcohol in fit doses improves the nerve-energy, and so increases temporarily the muscular power of the intestinal and abdominal walls.

(*Conclusion in next Number.*)

On Epileptiform Syphilis.

Dr. Celso Pellizzari details (*Lo Sperimentale*) the particulars of three fatal cases of cerebral disease, accompanied by convulsive attacks, in syphilitic subjects, which occurred in the hospital at Florence. Case I.—A man, aged 38, was admitted on account of convulsions, which had recurred more or less frequently during several days. There was a history of syphilis sixteen years before, and the man bore marks of old syphilitic sores about his body. He married five years after having contracted syphilis, and became the father of five sons, who died soon after birth. A sixth son was still living. There was no family history of epilepsy, and the first convulsive attack had occurred about ten months before the patient came under observation. On admission, the convulsions were confined to the left side of the body, and recurred almost every ten minutes, but soon became more general and with less interval between the attacks. Unconsciousness gradually supervened, and the man died two days after admission. The case on admission had been recognized as a syphilitic one, and mercurial inunction, with iodide of potassium internally, had been at once prescribed. *Post mortem*, there was found firm adhesions of the membranes to the right frontal lobe of the brain, over an area about the size of a five-franc piece. At this spot also the cortex of the brain was to a great extent destroyed, and its place taken by well-organized connective tissue. There were bony formations on the internal surface of the cranium, and also in the meninges; and gummy nodules of both testicles. Case II.—A boy, aged 8, born of syphilitic parents, who had himself been under treatment at various times for congenital syphilis, was suddenly seized during the night with a convulsive attack of very short duration. Next morning another fit occurred, involving only the left side of the body. In a third attack, the child fell down in the street. There was no family history of epilepsy. Other attacks occurred from time to time, and the

child was brought to the hospital. After admission, under mercurial inunction and iodide of potassium internally, great improvement took place; the fits became much less frequent, and the child began to walk about the ward. All was apparently going on well, when the patient was attacked suddenly by typhoid fever, and died in about three weeks. *Post mortem*, the skull and dura mater were found quite healthy, as was also the pia mater, except the right parietal region, where it was a little thickened and opaque. There was slight wasting of the brain-substance. No gummata nor tubercles were found. At the upper part of the right lung was a circumscribed patch of pneumonia surrounding a cicatrix, which seemed to be that of a bygone gumma. The liver presented a deepish cicatrix on its convex surface. In the intestines, clear evidence of typhoid was found. The author relates a third fatal case in which convulsions, beginning unilaterally, were probably due to syphilis. He also refers to the writings of most of those who have written on brain syphilis of late years, and discusses at considerable length the etiology, diagnosis, prognosis, and treatment of cerebral syphilis, attended by epileptiform seizures.—*London Med. Record*, Dec. 15, 1879.

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On Syphilitic Myositis.

The following case occurred in the service of M. DUPLAY (*Archives Gén. de Med.*, 1879, p. 731): A man had an abscess in the axilla, supposed to have been caused by the use of a centre-bit in his work. The abscess broke, and much pus escaped. There was no lesion of any of the fingers. The wound gradually ceased to discharge, and was going on well when, three weeks after the opening of the abscess, redness appeared over the whole pectoralis major, together with slight œdema and pain on trying to separate the arm from the side. The pectoralis major subsequently became as hard as wood, and the arm could not be moved. M. Humbert, who had charge of the patient, diagnosed suppuration, and passed a drainage-tube through the muscle, but with no good effect. The history of the patient was then inquired into, and syphilis was found to have been contracted four years previously. Under specific treatment all the inflammatory symptoms as well as the hardness quite disappeared, but the muscle became atrophied.—*London Med. Record*, Dec. 15, 1879.

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Salicylic Acid in the Treatment of Diabetes.

Dr. SCHAETZKE, publishes in the *Berliner Klin. Wochenschrift* for June 2, 1879, the history of three cases of diabetes successfully treated by salicylic acid. The first case was that of a lady aged 50, who had for eighteen months been under treatment for chronic gastric catarrh. Her father, sister, and husband had died of tuberculosis. When she was seen by the author, he at once suspected diabetes from the excessive thirst, polyuria, caries of the teeth, etc. The urine was examined, and found to contain sugar; the specific gravity was 1038. The patient was treated with salicylic acid, 3 *grammes* (45½ grains) being ordered to be taken three times daily for three days. On the first day, however, she felt giddy and had nausea. On the second day, she vomited once; her hearing was affected, and her gait became unsteady. The dose was, therefore, reduced from nine *grammes* daily to three *grammes*. Owing to her intolerance of salicylic acid, Herr Schaetzke sent her to Carlsbad. Upon her arrival there, the urine was found to be perfectly free from sugar, and remained thus both during her cure and afterwards. The second case was that of a man aged 58, who probably had been suffering from diabetes for the last two years. The urine contained a considerable percentage of sugar. As the patient could not be prevailed upon to go

to Carlsbad, he drank the waters at home, but without much benefit. Herr Schaetzke then again resolved to try the salicylic acid treatment, beginning, as in the first case, with three *grammes* three times a day. The patient also evinced great intolerance of the drug. It was, however, continued for two weeks, in doses of three *grammes* daily during the first week and two *grammes* during the second week, when the sugar disappeared from the urine and did not reappear. The other case was that of a girl aged 26, who had been suffering from colic for years. She was treated in the same way as the two other patients, but was obliged to discontinue the treatment after the first four days, owing to her intolerance of the drug. A week later, another attempt was made with a dose of two *grammes* daily; this was continued for a fortnight, when the urine remained free from sugar. It is curious that in every one of these cases the patient should have been so intolerant of the salicylic acid. Could this phenomenon be in any way connected with their disease? and, if so, in what way? A series of three cases can hardly be regarded as sufficient for establishing the reputation of salicylic acid as a cure for diabetes; but the subject is worthy of being more thoroughly investigated.—*Brit. Med. Journ.*, Oct. 11, 1879.

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Cortical Paralysis of the Arm.

At a recent meeting (Nov. 11, 1879) of the Paris Académie de Médecine, a paper was read by M. Gaston Decaisne, containing the history of thirty-six cases of brachial monoplegia, of which several came under his own observation. His conclusions point to the fact that there exists in each cerebral hemisphere a centre which regulates the motor power of the upper limb of the opposite side; that this centre, which is more extended than has hitherto been generally supposed, comprises not only the ascending frontal and parietal, but also a smaller or greater portion of the adjacent frontal and parietal convolutions. M. Decaisne believes that, in consequence of the large surface of the motor centre, the re-establishment of the motion may be effected by the aid of the cells in the vicinity of the lesion which have remained healthy. He also describes the peculiar characteristics of the paralysis in question very well, and his memoir will help to their being distinguished from those having a central origin, a diagnosis which is often very difficult at the bedside.—*Brit. Med. Journ.*, Dec. 13, 1879.

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Bromide of Potassium in Pertussis.

Dr. Körner, of Trebniss, writing in the *Berlin Klin. Woch.*, Nov. 7, says that he should not have repeated the recommendation of inhalation of the bromide, which he formerly published, had not a recent epidemic of wide extent given him ample reason for recurring to the subject. He treated all his cases in this by inhalation, effecting a cure in a proportionally short time. He employed a solution of from 2 to 5 per cent. (usually 4 or 5), about twenty grammes of which were inhaled three times a day. The effect was surprising. After the first inhalation decided improvement was observed, and in from three to five days the paroxysmal cough had ceased, and the expectoration had become easy. In a couple more days the pertussis usually had ceased. As a general rule, the children inhaled readily, and far more so than they would have taken medicines. He attributes the little repute this means has hitherto acquired to a mismanagement of the apparatus, and he advises the medical attendant to most carefully instruct the friends of the child in its use.—*Med. Times and Gazette*, Dec. 20, 1879.

Erysipelas of the Lung.

The doctrine of metastasis is not dead. If anything, it has risen again of late years into a position almost as high as that it occupied at the very dawn of medicine. Of all diseases in which this doctrine has been applied facial erysipelas stands foremost. Its acutely spreading nature, its frequently rapid subsidence, coinciding with grave constitutional or visceral complications, must always have laid it open to be so interpreted. Of all its complications, meningitis and pneumonia stand foremost. It is true that the supervention of each of these, with a fading cutaneous inflammation, might be accounted for by a continuity of inflammation along contiguous parts. But there is often no evidence of this, and "metastasis," the mysterious *Deus ex machinâ* of medicine, is held to be the cause of the rapid change in the locality of the inflammatory process. We all know how fond the "ancients" were of this explanation for many inscrutable facts of disease; we know how the laity of the present day cherish the same views, and even, it must be confessed, how the profession itself is compelled occasionally to adopt them.

A recent careful contribution to the subject—one more step attempted for the dispelling of metastasis—is furnished to the *Revue Mensuelle* for September by Dr. Straus. After a brief historical review, in which he points out the paucity of writings upon a form of pneumonia which could strictly be called erysipelatous, he relates the following case: A young journalist, twenty-six years of age, muscular and robust, neither addicted to alcohol nor the subject of syphilis, was attacked with facial erysipelas on March 10. He was admitted into the Menilmontant Hospital, under the care of Dr. Straus, on the 15th, by which time the eruption had extended all over the face and was invading the scalp. On the 17th defervescence began; the eruption ceased to spread; desquamation set in, but there was great prostration. Six days later he had pain in the right side of the chest, without any rigor, and cough without expectoration. On the 24th there was acute fever, sore throat, injection of tonsils and fauces, impaired resonance, and pneumonic crepitation at the base of the right lung. On the 25th the throat condition was worse, and the pneumonic signs had extended, and on the 27th he died.

It must be confessed that reading the case thus it seems most readily explained on the ground that he had been attacked with pneumonia during convalescence from erysipelas; that there was no direct causal relation between the latter and the former; that the supervention of the lung disease was a coincidence. But Dr. Straus does not think so. Clinically the insidious onset of the pneumonia, its rapid extension, and the absence of any other exciting cause, led him to think it depended on the erysipelas itself. He holds this to be borne out in a striking manner by the results of the *post-mortem* examination. The face was livid, not swollen. There was a thick, grayish coating to the tongue and palate; the pharyngeal mucous membrane was bright red—an appearance ceasing abruptly at the œsophagus. The right lung was hepatized throughout, the extreme apex alone being crepitant. All the rest of the organ presented a grayish but not very granular surface on section, studded with small reddish islets. The left lung was congested. The larynx was normal, but the tracheal mucous membrane, from the third or fourth rings downwards, was of a bright scarlet colour, contrasting markedly with the pallor of the laryngeal mucosa. Below, this vivid injection ceased at the level of the left bronchus, and did not occur in any of its divisions, but it continued throughout the right bronchus even to its smallest branches. There was no exudation. The redness was seen to be due to very fine vascular injection; it was much more intense than usually seen in pneumonic

lungs, and was most marked opposite to the interannular spaces. Microscopical examination of the affected lung showed a notable absence of fibrinous moulds and filaments, as in ordinary croupous pneumonia; the alveoli were stuffed with leucocytes, mingled with swollen multinucleate epithelioid cells; and the trabeculæ and interlobular septa were also greatly infiltrated with inflammatory cells. The absence of fibrin was as marked in the red as in the gray parts of the hepatized lung.

All these characters point, the author thinks, to the pneumonia being peculiar, and produced by the direct extension of the erysipelatous inflammation along the respiratory tract—that, in fact, he had to deal with a true "erysipelas of the lung." The curious thing is that the laryngeal mucous membrane should have so wholly escaped, if this view be correct; for, in the first place, had it been attacked, it is likely that œdema of the glottis would have carried off the patient before the process could have reached the lungs, and, in the second place, its exemption would be strange indeed, and would cause one to fall back on the doctrine of metastasis, which the author has sought to avoid. A third hypothesis propounded by the author is that the larynx was affected in so transitory a manner that no trace of its involvement remained after death. This is conceivable; only opposed to it is the fact that there were no clinical phenomena to bear out the idea of any laryngeal trouble whatever. So, as to this case, it must be left undecided whether the pneumonia were a mere coincidence in the convalescence of facial erysipelas, whether it were an extension of the erysipelatous inflammation directly from the skin to the lungs, or its indirect conveyance through the medium of metastasis, the pulmonary inflammation occurring on the retrogression of the cutaneous. These are interesting speculations, open to further examination before it is finally concluded that there is such a disease as "erysipelas of the lung."—*Lancet*, Nov. 8, 1879.

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On Operation for Empyema in an almost Moribund Patient, followed by Recovery.

M. Moutard-Martin (*Revue Médicale*, Nov. 1879) was called in to consult in the case of a little girl, aged 5, who eight days previously had been attacked with pleuro-pneumonia. He found the patient in a very serious condition. Her face and lips were blue, the cheeks pale, respiration incomplete and jerky, and the pulse was no longer perceptible. There was general anasarca, and the left side showed signs of effusion, filling the whole pleural cavity. It was doubtful whether any action should be taken, or whether it was not too late, and risk would be incurred of seeing the little patient succumb during the operation. M. Moutard-Martin, however, resolved to operate, and he performed paracentesis, which gave issue to a litre and a half of purulent liquid. The child did not die on the spot as was expected. Two days afterwards, as she had slightly improved, a very small quantity of pus was evacuated, because the cannula had become blocked up. On the third day all the unfavourable symptoms became aggravated; the spark of life which still remained seemed about to be extinguished, and complete asphyxia seemed imminent. One resource remained—the operation for empyema. The same serious difficulty now cropped up as in the first instance, but in accordance with the wishes of the family of the patient, M. Moutard-Martin wished to perform the operation for empyema, and incised the eighth intercostal space. The patient felt absolutely nothing, so far advanced was the asphyxia, and a tube was inserted into the pleura. The operation was followed by a veritable resurrection; the general condition improved and soon became quite satisfactory. The appetite returned, and increased to such an extent that the child could not be satisfied; the quantity of pus gradually but surely dimin-

ished, and M. Moutard-Martin gave up his patient in a state promising complete recovery. M. Féréol has observed an analogous case in another child, who was diagnosed as being attacked with tuberculous meningitis, and who seemed *in extremis*. An opening for empyema was about to occur spontaneously under the clavicle, when M. Féréol saw the patient. A purulent sac had been there formed which threatened to open speedily. M. Féréol performed the regular empyema operation, and the child was saved.—*London Med. Record*, Dec. 15, 1879.

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On Primary Suppurating Myocarditis.

M. Féréol reports (*Union Med.*, 1879, Nos. 27 and 28) the case of a cook, aged 44, who twelve years before had had intermittent fever, but had been otherwise healthy, until fourteen days before admission, when he was taken with sharp transient pains in the middle of the chest. On admission there were extreme dyspnœa, slight enlargement of the heart, very energetic cardiac action, without alteration of sounds, scarcely perceptible, but very rapid pulse, fine crepitant râles at the bases of the lungs posteriorly, no dulness, some bloody sputa. The heart-sounds became feebler, the stools dysenteric; œdema and cyanosis of the lower extremities set in, and the patient died on the 7th day. The necropsy showed slight enlargement of the left ventricle. In its muscular wall, near the slightly clouded or thickened endocardium, were numerous circumscribed abscesses with hemorrhagic peripheries about the size of a pin's head, most numerous at the apex, where the endocardium was covered with old clots, containing purulent masses in their centres. In the aorta there were fresh patches of endarteritis side by side with old atheroma. There was atheroma in other arteries, but not in the coronary arteries. There were no embola or infarcts. The lungs were hyperæmic; the spleen was not enlarged, its capsule was thickened. Microscopical examination showed purulent infiltration between the muscular fibrillæ around the abscesses, and a peculiar degeneration of the fibrillæ, which became bright shining, not staining with picrocarmine, and showing a double contour.—*London Med. Record*, Dec. 15, 1879.

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On Aneurism of the Aorta in a Syphilitic Subject.

A man, aged 48, had aneurism of the aorta and a swelling on one tibia. Death occurred from the bursting of the aneurism opposite the head of the pancreas. Under antisyphilitic treatment the tibial swelling had diminished. The morbid specimens were shown by M. Vallin, at the Société Médicale des Hôpitaux (*L' Union Med.*, June 19, p. 24, 1879), and gave rise to a discussion on the relation between syphilis and aneurism. M. Fournier considered it demonstrated beyond doubt that aneurism might result from syphilis, not strictly as a syphilitic lesion, but as a consequence of lesion of the walls of the vessel developed by syphilis. Syphilis ought assuredly to take a place in the etiology of aneurism, but in what proportion of cases was not yet known. The non-success of remedies was no argument against this view, because aneurism, once formed, was an accomplished lesion, just as was a perforation of the palate, upon which we could not expect medicines to have any effect. M. Cornil said syphilis had a great deal to do with arteritis, but when an aneurism had once formed, specific treatment was powerless.—*London Med. Record*, Dec. 15, 1879.

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On Local Temperatures in Diseases of the Abdomen.

Prof. Peter, in continuation of his investigations on morbid local temperatures (see *Monthly Abstract*, 1879, p. 443), communicated to the Académie de Méde-

cine (*Gaz. Médicale*, Dec. 13) the first part of a paper "On Morbid Local Temperatures in Diseases of the Abdomen."

It results from these investigations that in ascites the temperature of the abdominal wall does not rise, but continues at about 35.5° Cent. (which is the normal mean, and sometimes even falls below this). Prof. Peter criticizes the language of those who give the name of ascites to the serous effusion of chronic peritonitis, this effusion being not dropsical, but inflammatory, as is demonstrated, amongst other circumstances, by the excess of fibrin which it contains. Contrary to what is observed in ascites—that is, dropsy of the peritoneum—*chronic phlegmasias of this membrane raise the temperature by one degree or more.* Prof. Peter gives as examples three cases of different types of chronic phlegmasia of the peritoneum —1. Simple chronic peritonitis radiating from a chronic phlegmasia of the stomach (sclerous gastritis); 2. Chronic tubercular peritonitis; 3. Chronic cancerous peritonitis. In the first case the local temperature of the abdominal wall was raised by 0.8°, when that of the axilla was lowered by 0.5° (the temperature of inanition)—so that the absolute local super-elevation amounted to 1.3°. In the tubercular peritonitis the super-elevation varied from 1° to 1.9°, and presented the remarkable peculiarity that, during the last hours of life, the axillary temperature was lowered by 2.5° (to 34.5°), the local temperature being still elevated 1° above the normal (36.5°) of the abdominal wall—exceeding absolutely that of the axilla by 2°, and being relatively greater by 3.5°; proving the existence of morbid thermogenous centres, the local temperature of which is so far independent of the general temperature that it may be superior to it. In cancerous peritonitis the local super-elevation varied from 0.8° to 2°. In a fourth case (of tubercular peritonitis, which was mistaken for a hysterical tympanites) the super-elevation varied from 1° to 1.5°, and was one day 0.4° higher than in the axilla.

Thus, in a clinical point of view, this super-elevation of local temperature in chronic peritonitis furnishes a new means of diagnosis between chronic peritonitis and ascites, in which the temperature remains normal. With respect to general physiology, ascites does not raise the normal temperature because it is a mere physical fact—the filtration of the serum of the blood through the distended walls of the veins; while chronic phlegmasia *always raises this local temperature*, because there is here a dynamic act, a process—the secretion of a fibrinous serosity. Whence it follows that, in pathology as in mechanics, whenever there is work accomplished there is caloric disengaged, which disengaged caloric, representing a process accomplished, may become a means of diagnosis of this process. This idea of morbid work done need not be confined to the secretion of an inflammatory morbid product, but may be extended to genesis of a neoplasm (tubercle or cancer), and to the evolution of this—the caloric disengaged on this occasion revealing the origin and the phases of the evolution of this neoplasm.

M. Hillairet observed that he had made some investigations on local temperatures in disease of the skin, but had abandoned them in consequence of the considerable differences he had observed in the results. He wished to know what thermometer Prof. Peter employed. In reply, Prof. Peter said that he used the ordinary thermometer, which always gave him very exact results. He regarded it as preferable to the discoid thermometers employed in England, which have the inconvenience of not being able to be applied in the intercostal spaces. There are other instruments of great precision, but of difficult employment. M. Noel Guéneau de Mussy spoke favourably of the thermometer employed by Dr. Seguin of New York.—*Med. Times and Gazette*, Dec. 20, 1879.

Diseases of the Stomach.

M. LEVEN, the chief physician to the Rothschild Hospital in Paris, in his recently published work (*Treatise on Diseases of the Stomach*), which is based on very extensive clinical researches, and on numerous physiological experiments, formulates some novel theories, which are of considerable importance, from the clinical and therapeutic points of view. With regard to the physiology of the stomach, for instance, M. Leven admits, and seeks to establish by his experiments, that the function of the stomach is much more mechanical than chemical. If the aliments be liquid, they are almost immediately driven by the contractions of the stomach as far as the intestines; if they be solid, they are simply then chymified; that is to say, transformed into a semiliquid mass, able to pass into the intestines, which is the true centre of digestion of nitrogenized elements like fecula and fats. Neither peptonization nor absorption takes place in the stomach. The function of the stomach is the same with regard to all kinds of food. With regard to the secretion of the intestine, M. Leven also postulates a totally new theory, since he believes that the intestinal juice has an acid reaction similar to that of the stomach, and not alkaline, as the physiologists assert. This difference is connected with the fact that in the experiments, which are destined to yield intestinal juice, purgatives are used, which bring on a very acute congestion of the mucous membrane, and consequently an exhalation, which is nothing else than the serum of the blood, with its alkaline reaction—a fluid analogous to that which would be obtained by a veritable traumatic irritation of that mucous membrane. From this way of looking at the physiology of the gastro-intestinal apparatus, there also arise great differences in the appreciation of the nature of the diseases of the stomach, and especially of dyspepsia, which includes them all. Dyspepsia, in fact, is no longer in any case a functional trouble, a neurosis of the stomach, but is characterized by congestion and inflammation of the mucous and underlying membranes, such inflammation being capable of producing degeneration of the mucous membrane, sclerosis of the septa of the vessels, and hypertrophy of the submucous cellular tissue. In so considering dyspepsia, gastralgia, which is mixed up with it, and is naught else than dyspepsia with painful crises, must not be dissevered from it. Ulceration is only an accident, a complication of chronic dyspepsia. Cancer itself may follow the same affection. Hereditary cancer, which comes on at once, alone presents a different origin, the result being that all diseases of the stomach, the last-named form of cancer excepted, are reduced to one morbid species, dyspepsia. It will be recognized that Dr. Leven's theory approximates greatly to that of Trousseau, who recognized the effect of a gastritis in every dyspepsia. The therapeutic conclusions are, however, absolutely different, for, according to him, the proper treatment of diseases of the stomach consists, above all things, in regimen and hygiene, medication only playing a secondary part. M. Leven also is absolutely opposed to the opinion of Trousseau, that dyspeptic patients are the best judges of the food which agrees with them, and which they can digest. He affirms, on the contrary, that it is extremely important that the medical attendant should direct the regimen of his patient, and superintend his mode of life. He therefore lays great stress on this part of therapeutics, as well as on the etiology of dyspepsia. In this portion of the book, which is evidently destined to give rise to much criticism, the practitioner will find many useful suggestions.—*London Med. Record*, Dec. 15, 1879.

On Diffuse Phlegmonous Gastritis.

DELLINGER records (*Deut. Arch. f. Klin. Med.*, Bd. xxii.) the following case of diffuse phlegmonous gastritis: A pensioner, aged 53, a great brandy drinker, was taken ill three days previously with severe rigors, followed by fever (100.4 to 104.5 Fahr.), frequent vomiting and continual diarrhœa. The epigastrium was distended and very tender. After a few days there were great resistance in the gastric region; increasing loss of strength; delirium; some more rigors one day before death, which occurred on the eighth day. At the necropsy the wall of the stomach was found much thickened. The mucous surface along the fundus and the great curvature was perforated like a sieve by small losses of substance, out of which thick yellow pus could be squeezed. On section through other parts of the stomach, in some places diffuse purulent jelly-like infiltration, in other places submucous abscesses as large as hazel-nuts, were present. The chief part of the infiltration was between the mucosa and muscularis, but in many places involved the muscular and even the subserous tissue. Besides these lesions there were commencing liver cirrhosis and chronic gastric and intestinal catarrh. In some parts of the gastric peritoneum there were thin fibrinous false membranes. In respect to the diagnosis, he lays stress on (1) the fever and general symptoms; (2) the nature of the pain in the stomach, which, unlike peritonitis, was not increased by movements; (3) the increased resistance in the epigastrium. His second was one of gastritis phlegmonosa circumscripta. A woman, aged 32, was taken ill with rigor, fever, pain in the stomach, and vomiting. In the epigastrium, which was at first only painful on pressure, resistant, and distended, a tumour as large as a fist developed, which disappeared, after the patient at the twentieth day vomited up a quarter of a litre of bad smelling, yellowish-white blood-streaked pus, with a feeling as if something was torn in the stomach. Very rapid convalescence followed. The patient had complained of gastric pain a year before, so it is possible that there may have been an ulcer, which led to the formation of the abscess.—*London Med. Record*, Dec. 15, 1879.

Lesions of the Peritoneum in Drunkards.

Prof. LEUDET, of Rouen (*Gaz. Hebdom.*, Dec. 5), read a paper on this subject at the recent Montpellier Congress, and arrived at the following conclusions: 1. Persons who abuse alcoholic drinks may become the subjects of ascites, which comes on without marked symptoms and without prior notable derangement of health. 2. Such ascites is susceptible of prolonged arrest, and perhaps even of a definite cure. 3. The chronic peritonitis of drinkers may come on slowly without any grave symptom. 4. It seems frequently to be the result of a slow irradiation of lesions of the digestive canal, such as gastric cirrhosis, with or without ulceration, or of enteritis. 5. Chronic peritonitis may induce inflammatory recrudescences of the peritoneum, general or partial effusions, or intra-peritoneal hemorrhage.—*Med. Times and Gazette*, Dec. 13, 1879.

Surgery.

Methods of Transfusion.

At a recent meeting of the Obstetrical Society of London (*Lancet*, Dec. 13, 1879) Mr. E. A. SCHAFER, F.R.S., presented a report of an experimental inquiry into the methods of transfusion. The first part of the inquiry was to

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ascertain whether any other fluid, such as milk, could with advantage be substituted for blood in transfusion. Numerous experiments were made on this point, with the co-operation of Mr. G. F. Dowdeswell. It was found that rabbits generally died within twenty-four hours if ordinary milk was injected into their veins, even in small quantities. The blood-corpuscles became disorganized, and the blood swarmed with bacteria. Milk which had just been boiled, or which had been drawn direct from the cow's teat into a previously superheated vessel, was innocuous. Dogs and cats resisted the action of septic organisms in milk. In animals reduced by bleeding to an almost lifeless condition, the injection of milk into the bloodvessels was sometimes, but not always, followed by temporary rise of blood-pressure, but there was never any permanently beneficial effect. Such animals always died. These results are confirmatory of those of Howe and Dupuy in America. It was next explained that no fluid lacking hæmoglobin could be expected to be of benefit in cases of acute anæmia.

The question next to be determined was whether the blood of any other animal could be used for transfusion in cases of depletion of the human subject. This question is answered in the negative by the results of the microscopical examination of mixtures of human blood with the blood of the lower animals. As Landois and others have already shown, sooner or later the red blood-corpuscles of one or of both kinds of blood become dissolved. Moreover, the white blood-corpuscles cease their amœboid movements, and are soon killed. Sometimes the solution of the colouring matter of the blood-corpuscles occurred in a few minutes, sometimes not for some hours. At any rate the action of the blood or serum of the lower animals is by these experiments proved to be an actual poison to the human blood-corpuscles, and would probably be the same to the living cells of the tissues. Moreover, it was found that dog's blood could not be transfused to any great extent into a cat in place of the animal's own blood, or lamb's blood into a dog, without fatal consequences. The result of these experiments, then, is to prove that *in man only human blood can be used with advantage for transfusion.*

It was next sought to determine the best method in which transfusion can be effected, and especially if it were possible to transfuse arterial blood into an artery towards the heart. The great advantage which such a method must present is pointed out by Blundell, who, in one passage in his "Researches," gives as a reason for recommending such a course that the circulation through the coronary arteries is at once renewed, and the heart thereby strengthened. Numerous experiments were accordingly made upon dogs and cats with the object of testing the result of such a mode of transfusion and its applicability to the human subject. In these experiments an animal was first depleted of blood until arterial pressure had sunk almost to zero, and one of its arteries (femoral) was connected, by glass canulæ and simple india rubber tube filled with carbonate of soda solution, with the artery of another healthy animal. The connection was in every case followed by a recovery of the depleted animal almost magical in its rapidity and extent. It was found that a flow of one minute's duration was generally enough to restore the patient, and further that there was little or no danger of the flow of blood from the donor being excessive, for the pressure in the arterial system of the recipient speedily became equal to that in the donor. Out of many experiments of this nature in only one was the ultimate result unsuccessful, death occurring on the seventh day from secondary hemorrhage. But in this case the animal was unhealthy (skin disease) at the time of the operation.

It was pointed out that the ordinary risks of transfusion, such as the introduction of air or clots into the veins, and the supervention of phlebitis, are absent from this operation, and that it has further the advantage that no apparatus is

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required beyond a simple tube, and that the blood is at once introduced into the situation where it is most needed—viz., the arterial system. The difficulties that are presented by the use of arteries for transfusion were not lost sight of, but it was insisted on that the very general fear of dealing with arteries is in great measure unfounded; especially if a minor artery is employed. In the human subject it is recommended that the dorsal artery of the foot should be used both to yield the blood and to receive it. The exact method in which the operation is to be performed was described, and the tubes and canulæ recommended were exhibited.

The details of the experiments on transfusion, and especially of transfusion from vein to vein, instead of from artery to artery, then followed. These showed that transfusion from vein to vein, through a simple india rubber tube with glass termini previously filled with carbonate of soda solution, was both easy and, except in extreme cases, in which the heart had almost ceased to beat, rapidly effectual. It was found that the intervention of an elastic pump, as in Aveling's apparatus, did not accelerate the flow, but in some cases stopped it by sucking in the wall of the vein, and was, moreover, liable to force clots into the patient's vein. And it was pointed out that there is no object in measuring the amount of blood which flows except by the effect produced upon the patient and the donor.

Finally it was recommended, as the result of these experiments: 1. That fluids other than human blood should never be used for transfusion in cases of hemorrhage. 2. That transfusion should always, if possible, be effected through a simple flexible tube with glass canulæ. 3. That direct centripetal arterial transfusion should, if possible, be employed. 4. That failing any person willing to submit an artery to yield the blood, but ready to allow of the exposure of a vein, direct venous transfusion be employed. 5. If it is impossible to attempt either arterial or venous direct transfusion, immediate transfusion of either unwhipped or whipped blood collected into a funnel and allowed to flow through an india rubber tube and glass canula into a vein can be tried, although with greater risk of the introduction of clots and of the germs of putrefactive bacteria into the vascular system of the patients.

The President, Dr. Playfair, expressed his sense of the great value of the report. At the same time he felt that there were great difficulties in carrying out direct transfusion, especially the arterial. The objection to opening an artery, and the state of general confusion of a household at the time transfusion was required, rendered it extremely difficult.

Dr. Hicks agreed that it was impossible in many cases to effect direct transfusion, and asked if saline solutions (such as of phosphate of soda), used to prevent the blood to be transfused from coagulating, rendered people more liable to hemorrhage after its use.

Dr. Champneys stated that the effect of transfusion of lamb's blood in persons suffering from exhausting disease at Dresden were blushing, dyspnœa, hæmaturia, and, in some cases, urticaria. No fatal cases occurred.

Dr. Aveling objected to arterial transfusion, preferred venous, and advocated elevation of the limbs and buttocks, with lowering of the head.

Dr. Cory had transfused three times—twice with saline solution, both died; once by Roussel's apparatus, and the case recovered.

In reply, Mr. Schafer pointed out the danger from using defibrinated blood, acknowledged the difficulties of direct transfusion, and stated that the blood might be prevented from coagulating by mixing with it saline solutions, but the transfusion of such a mixture would prove fatal.

Section of the Ciliary Nerves for Sympathetic Ophthalmia.

The origin of sympathetic ophthalmia is still a matter of discussion; it is, however, generally referred to the irritation of the ciliary nerves, and not to that of the optic nerve. According to the *Journal de Médecine et de Chirurgie Pratiques* for December, 1879, M. ABADIE has consequently come to the conclusion that by destroying by section the influence of these nerves, he would arrive at the same result as by enucleation of the eyeball. He has obtained this result in a good many cases. The section of the ciliary nerves did not modify the state of the eyes when the cornea was transparent; in the other cases, the patient tolerated the presence of an artificial eye, and sympathetic ophthalmia has thus been arrested.—*British Med. Journal*, Dec. 27, 1879.

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On the Pathology and Treatment of Detached Retina.

Dr. F. MORANO (*Giornale Internazionale delle Scienze Mediche*, n. s. Anno 1, fascic. 9, p. 959) enters into the subject at considerable length. He considers that the researches of Ivanoff, Poucet, and Raehlmann have conclusively established that detachment of the retina can arise from several distinct causes. Choroiditis is perhaps the most common, but partial or total liquefaction of the vitreous body in progressive myopia is also another. He believes that, so long as the vitreous body is unchanged both in volume and physical properties, its detachment by the formation of a layer of fluid between it and the choroid is impossible. Detachment of the retina will always be found to depend on *distension*, that is on some *vis à tergo*, never on *attraction*, or *vis à fronte*, except, perhaps, in the case of an intra-ocular tumour. As regards treatment he reviews the various methods of puncture through the sclerotic, with evacuation of the fluid, as suggested by Siebel, of laceration and of drainage. The first of these has, on the whole, given the best results. The last is both dangerous and inefficacious. In the author's opinion, in recent cases of detachment, medical is of far greater importance than surgical treatment. He advises the use of the artificial leech, coupled with absolute repose of the eye in a dark room, a compress bandage, and mercury to salivation, with subsequently, if necessary, a course of iodide of potassium. One case so treated recovered in four weeks sufficiently to read No. 7 of Wecker's test-types.—*London Med. Record*, Dec. 15, 1879.

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On Osteogingivitis Gangrænosa Neonatorum.

KLEMENTOWSKY describes under this name three very similar cases, the first he ever met with during twenty years' practice among children, in the Foundling Hospital at Moscow. CASE I. A boy, aged six days, well nourished, healthy, was taken ill with high fever, and an erysipelatous flush on the right cheek. The following day the latter had disappeared, but an œdematous dark swelling had appeared on the gums of the right upper jaw. Towards night two teeth broke through the swelling, and fell out; the swelling diminished in size; ulceration set in four days later, and the child died. At the necropsy gangrene of the upper jaw and pyæmia were found. CASE II. A girl aged one month and a half, badly nourished, had high temperature, and a small gangrenous abscess on the gums of the upper jaw on the left side. On the second day, a tooth broke through the abscess and fell out, the swelling diminished, the temperature rose, and a gangrenous abscess formed on the right side of the upper jaw. On the fourth day it began to heal; on the fifth, peritonitis set in; and on the sixth, the child died. The necropsy revealed purulent gingivitis with ulcerations, and diffuse purulent peritonitis. CASE III. A boy, aged thirty-eight days, well nourished,

had gastric catarrh a short time ago. There was high temperature, with a purple swelling of the size of a nut on the gums, corresponding to the right upper eye-tooth. On the second day a tooth pierced the tumour, and fell out; was replaced by a dentiform granulation surrounded by necrotic tissue. On the third day the swelling and granulation diminished, and suppuration set in. The wound healed during the following days; but on the fourth the temperature again rose, and a hard reddish swelling appeared on the left side of the gums, corresponding to the upper molar teeth. No pus escaped on incision. During the following days necrosis set in, the swelling beginning from the edges of the incision, gradually exposing a tooth and the bone in the alveolus. There were fetid suppuration, and a gangrenous perforating abscess of the left cheek. Death occurred on the forty-seventh day. At the necropsy it was found that the two posterior thirds of the left half of the upper jaw had become one gangrenous cavity, the periosteum was detached from the zygomatic bone, and the latter was necrotic.—*London Med. Record*, Dec. 15, 1879.

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On Certain Methods of Improving Vision in Cases of Detached Retina.

Dr. FANO (*Journal d' Oculistique et de Chir.*) suggests that, as detached retina is practically an incurable affection, it would be more rational to direct treatment to utilizing for purposes of vision any portions of retina still remaining unaffected. With this object he recommends making an artificial pupil opposite any existing healthy portion. In cases where one eye is completely, and the other partially, blind from this affection, he would combine a tenotomy with an iridectomy, there being, under the circumstances, no danger of causing diplopia. Much good, he thinks, might also in many cases be done by the judicious use of prisms. Various prisms should be tried in succession, until one has been found which makes the rays of light fall on the most percipient portion of retina. It should then be worn permanently. If necessary, the treatment by prisms may be combined with an iridectomy or a tenotomy, or with both.—*London Med. Record*, Dec. 15, 1879.

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On Injections of Chloride of Zinc in Ranula.

For some years past M. LE DENTU (*Journal de Méd. et de Chir. Pratiques*, Nov. 1879) has studied and endeavoured to determine the indications for, and the method of, operation in treating ranula by injections of chloride of zinc. Three years ago he was deputed to make a report on this plan, as recommended by M. Théophile Anger for ranula and hygroma. The method appeared to him to be excellent for the latter affection, but less adapted to the former, in consequence of the violence of the inflammation it might bring on. It is with the object of avoiding this complication that M. Le Dentu has endeavoured to exactly determine the conditions under which this operation should be performed. The solution employed is the deliquescent chloride of zinc, which is transparent in its upper strata, and turbid at the bottom of the vessel. The instrument used is a syringe of gutta percha, which cannot be injured by the liquid. The injection also is very easily made. The canula should be introduced to a certain depth. Immediately a sensation of heat is produced, which soon irradiates and spreads throughout the mouth. The syringe is removed, and a small white spot is seen at the point of puncture. The quantity of liquid injected should never exceed two drops, and should sometimes be less. In a short time the burning sensation extends to the side of the face, and is replaced by neuralgic pains. It may also take on the character of inflammatory pain, and give rise to dysphagia. Sometimes even there are respiratory troubles, which proves that the œdema may ex-

tend to the opening of the larynx. The swelling takes two or three days to attain its maximum, and may then be of considerable proportions. At this crisis the patient may suffer positive anguish, but after the third day only a small amount of inflammatory induration at the level of the ranula remains. The swelling, which still persists, disappears gradually, and the original tumour disappears completely. These are the principal phenomena noted after operation. M. Le Dentu has performed it six times under the following conditions. The first patient was a woman having a tense elastic but depressible ranula. Two drops of chloride of zinc were injected into the tumour, and the result was a very acute and even alarming reaction, causing apprehension of some complication. However, none occurred, and the patient was radically cured. In the second case the patient had already been operated on, and the tumour had again made its appearance. One drop and a half injected into the ranula, which was small, did not induce any reaction, but only a little pain and swelling of the region. Cure in this case also was complete. In another case a woman, aged twenty-two, had a very full and tense tumour. With two drops of chloride of zinc the reaction was extreme; dysphagia and even dyspnœa were produced. Nevertheless, cure was effected, as in the other cases. A ranula developed itself in a girl, aged ten, and opened itself every week by the same orifice. A drop and a half brought on only an ordinary reaction, such as is desired in all cases, and was followed by cure in ten days. Finally, in two cases in which small ranulæ were present, half a drop only was injected. A small unimportant sphacelus was produced, which in no way hindered the cure. From his observations, M. le Dentu concludes that the injection of chloride of zinc into the ranula constitutes an almost infallible method of cure, but of which the handling exacts certain important precautions. The reaction in fact is variable, according to the cases, and probably has reference to the previous condition of the sac. The tension of this sac appears to have a great deal of influence on this result, and in the cases in which it was very pronounced reaction has been the most marked, so that it may be questioned whether it is not indicated to relax the sac, by previously removing a certain quantity of the liquid contained in it. It is equally important to define the quantity of chloride of zinc to be used for the injection. A drop or half a drop is sufficient for small ranulæ. In tumours of a medium size a drop and a half, and in fully developed ranulæ two drops are the maximum, which should never be exceeded. In children especially only very small doses should be used, because the serious phenomenon of reaction are more to be feared than in adults.—*London Med. Record*, Dec. 15, 1879.

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Cancer of the Breast following Eczema of the Nipple.

At a late meeting of the Clinical Society of London Mr. G. Lawson reported the case of a married lady fifty-one years of age, who consulted Dr. Tilbury Fox in July, 1878, for a chronic eczema of the right breast, which she had had for several years, but which had not healed. Dr. Fox asked Mr. Lawson to see the case, for fear there might be evidences of cancer, but at that time the gland itself was unaffected; the nipple, however, was slightly retracted; the axillary glands were not enlarged. Twelve months later the patient came again, and now the breast was large and hard, and there was an enlarged gland in the axilla. Sir James Paget, who was consulted, concurring, Mr. Lawson removed the breast and lymphatic gland; the wound healed rapidly, and at the end of three weeks the patient returned home. There has been no recurrence hitherto. Dr. Thin, who examined the organ microscopically, found the diseased skin to be sharply limited by a zone in the epidermis; the corium was the seat of chronic destructive inflammation, and the connective tissue of the nipple was infiltrated

with epithelioid cells; the small portion examined contained no ducts, so that direct continuity of change in them and the gland (which was the seat of well-marked epithelial cancer) could not be traced. Mr. Lawson remarked that the case belonged to the class drawn attention to by Sir James Paget and Mr. Butlin, where eczema of the nipple preceded cancer of the breast. It might be doubted if this so-called "eczema" is indeed a true eczema, owing to its long duration and intractability. In this case (the specimen was shown) the patient had suffered four years from what had been regarded as eczema of the nipple, and that her breast might become the seat of cancer was frequently anticipated. The important practical question was whether in cases of intractable "eczema" of the nipple the breast should be excised, thus anticipating the development of cancer. In one case where an ichthyosis of the tongue had lasted for eighteen years, he had excised the organ, from the knowledge that such a condition almost invariably terminated in epithelioma. On the same principle he also frequently excised an eye which had been dangerously wounded, in order to anticipate the development of sympathetic ophthalmia on the opposite side.

Dr. THIN was, and still is, of opinion that the cutaneous change in these cases is not eczema; a papular or vesicular eruption with exudation did not suffice for the diagnosis of eczema, and in the present case the very sharp line of limitation of the affected patch was against its being an eczema; were it so, there would have been intolerable itching. He did not regard the "eczema" as preceding the cancer, but the contrary. There was evidence of epithelial growth in the lactiferous ducts, and he suggested that the epithelium might remain long affected but quiescent, still, however, causing the production of a certain amount of "cancer-juice," which would produce a distinctive and incurable affection of the skin in the vicinity. To treat such an affection as if it were an eczema was to ignore its cancerous condition. Eventually, however, the change is propagated to the gland itself and to the neighbouring lymphatics.

Mr. BUTLIN said that he was to a certain extent responsible for the use of the term "eczema" in this connection; for Sir James Paget in his paper on the subject had called it an "eczematous condition." It was a raw, excoriated condition of the nipple, which was constantly discharging. In most of the cases he had seen the nipple was in this state. In one case the nipple protruded, was redder than the opposite nipple, and was covered with small scales. It did not discharge from the surface, but was firmer and less elastic than the opposite one. Histologically this nipple presented the same characters as in the other cases, with change extending down the ducts. In the first case he described, he found all the ducts in the nipple full of diseased epithelium, but in others the change was limited to some of the ducts, which could, however, be traced directly down to the cancer in the gland.

Sir JAMES PAGET said that the subject was one of those in which clinical and pathological facts had not yet come to accord. Perhaps it was unwise to give the name of eczema to the condition, for the rule should rather be, if any breast had suffered long from great disturbance of nutrition, it was in risk of becoming cancerous. He said "becoming cancerous," for from the clinical point of view he would differ wholly from Dr. Thin; for there were stages in this disease in which it was curable. Nor do they stand alone; they are examples of a very large group of affections which are liable to become cancerous. Mr. Lawson had referred to one of them—*e. g.*, ichthyosis of the tongue. It would be bold to say that all these were cancerous from the beginning, especially as for periods of three or four years their progress was so slow and hardly observable, and then cancer rushes in. Another group allied to these was that of scars after burns of the lower extremity. If in advanced life these begin to ulcerate, they are very

liable to become cancerous. So again with syphilitic disease of the tongue, and many more conditions in which cancer was likely to supervene later in life. What the precise changes are—whether the result of a gradual process, or the intervention of some new factor—he could not say; but from the clinical side there was a time in such cases when the disease was not cancerous, and a time beyond which cancer is almost sure to occur.

Mr. HUTCHINSON said they were clearly dealing with the pre-cancerous stage of cancer, and they should feel obliged to Mr. Lawson for his advocacy of prompt and energetic intervention in such conditions. Some years ago he wrote a paper "On the Successful Cultivation of Cancer," to draw attention to the ill that resulted from the use of mild measures. He doubted the wisdom of attempting any very accurate definition of eczema. The important fact was that cancer supervened upon that which clinically and commonly is styled a local eczema. The term eczema did not admit of precise definition; it did not embrace any one clinical group of symptoms. So that it was very probable that in some cases a disease which is a local disorder of the nipple ends in inducing cancer, as the patient advances in years and the cancerous period of life is entered on. And this may be, although some cases (a minority) did recover, and did not issue in cancer; and he thought Mr. Lawson had well put it in saying that if an eczema of the nipple *resists* treatment for a long time, then surgical interference should be had recourse to. He also agreed with Mr. Lawson in his advocacy of early treatment in ichthyosis of the tongue. He had removed such a patch, which to the naked eye showed no evidence of cancer; but it was in the precursory stage, and an experienced histologist, who examined it, reported that carcinomatous elements were present in it.

Mr. H. MORRIS had had two cases under observation which bore out the facts stated. They also presented the clinical history of this so-called eczema of the nipple, and ended with mammary cancer and widespread cancer in internal organs. The duration of the condition of the nipple and areola—in one case five or six years—was far too long to suppose that the cancer in the breast had preceded it, the duration of mammary cancer being seldom more than twelve months. At the same time age should be taken into account; for there had come to the cancer department of the Middlesex Hospital a girl, eighteen years old, who had had ulceration of the nipple and areola. She had been told that it was cancer. It was a very difficult point to know when to advise removal of the breast showing this condition, and just the same difficulty was present in regard to ichthyosis of the tongue. He knew of a man with the latter affection, from which he had suffered for four or five years, but he had not felt warranted in operating. The number of cases at present observed was too small to formulate any rule as to the length of time which this condition of nipple should be allowed to last before it was right to operate. During the last ten years he had seen very many cases of mammary cancer in the cancer department at the Middlesex Hospital. When he was registrar, there was no case in which a history of previous ulceration of the nipple was ascertained; and out of upwards of 500 cases he had seen in the past six years in only two (those he had cited) had this condition preceded the cancer.

Mr. LAWSON, in reply, said that he would content himself with giving the opinion of the late Mr. De Morgan on this subject. On May 15, 1875, he saw a case of "eczema of the nipple" with Mr. De Morgan, who, deeming it to be an epithelial cancer, destroyed it by chloride of zinc. On Dec. 19, 1877, Mr. Lawson saw the patient again, and she had a large bunch of glands in the axilla, which he removed, after consultation with Sir James Paget. The patient was now dying from internal cancer.

Dr. THIN, in reply, said that he did not mean that the cancer of the mammary gland preceded the skin affection, but that the ducts in the nipple were the seat of abnormal and irregular epithelial growth, which might remain so for years without change. If the diseased parts be removed at this stage, recovery might be assured; but the longer it lasted the more risk there was of the membrana propria of the ducts giving way, and the epithelial growth spreading into the connective tissue and into the gland-substance.—*Lancet*, Nov. 1, 1879.

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On Syphilitic Stricture of the Rectum.

In M. GOSSELIN'S opinion (*Gaz. des Hôpitaux*, Aug. 21, 1879), this kind of stricture is of an inflammatory nature, resulting from fibrous transformation of the submucous cellular tissue, and perhaps also of the mucous membrane itself, following an inflammation of these structures, having its origin in a rectitis caused by chancres of the anus. M. Gosselin calls this "syphilitic rectitis," and also calls the stricture which is the consequence of it "syphilitic stricture," but states that he does not therefore mean that it is dependent on the syphilitic diathesis, but simply that the origin of the rectitis is a chancre, causing inflammation of the anus, which inflammation afterwards extends into the interior of the bowel. As regards treatment, M. Gosselin, till lately, has been content simply to dilate, and in cases of narrow strictures of small extent, to notch them with a bistoury at several points. Now, however, he employs the treatment recommended by Verneuil, which consists in complete section of the strictured parts by Paquelin's cautery. By this means the retention of feces and purulent matter above the stricture is prevented.—*London Med. Record*, Dec. 15, 1879.

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On Bubon d' Emblée.

The term "Bubon d'emblée" means the absorption of virulent pus at a certain point, and its transport to a lymphatic gland without appreciable lesion or solution of continuity of mucous membrane, skin, or lymphatics. M. MAURIAC has never seen such a case, but reports (*Gaz. des Hôpitaux*, June 12, 19, July 1, 31, 1879) three cases which might easily have been mistaken for bubon d'emblée. Case I.—A man, aged 38, was admitted under M. Mauriac's care in November, 1874, with a swelling in the groin, but nothing on the genital organs, and no history of a sore since 1867. The swelling burst and left a large ulcer. No signs of syphilis could be made out. The sore in the groin became so like a chancrous bubo that M. Mauriac diagnosed it as such, supposing that a chancre had existed, and had been so small as to have escaped the patient's notice, and healed before he came under observation. Auto-inoculation, and afterwards cauterization, was ordered; but, through some mistake, the ulcer was cauterized first, so of course inoculation was useless. Iron was given internally, and various applications, including a solution of tartrate of iron, were used locally. Cicatrization took place at the end of a month, and the patient went out. Some time afterwards, the man was re-admitted, as the sore had broken out again. The scrotum also was implicated, and the ulcers became phagedenic. M. Mauriac now thought of syphilis, and prescribed specifics, under which rapid improvement at once occurred. This man, in M. Mauriac's opinion, assuredly became syphilitic in 1867, but the disease had afterwards remained latent. Latent syphilis is not uncommon, and may cause mistakes in diagnosis, as in this case. When in doubt, the repetition of morbid action in the same place, as happened here, may put one on the right track. Case II.—A man, aged 34, had painful swelling in the right groin, which finally burst and discharged much pus, but the opening did not heal. Inoculation gave no result. There was no lesion of any part of the area supplied

by the lymphatics to account for the abscess. No other glands were enlarged, and there were no signs of syphilis. The man had had chancres six years previously. Gumma of the glands was diagnosed, and mercury and iodide of potassium were given, simple ointment being applied to the sore. In twenty-three days it was almost healed. Case III.—A man, aged 54, who had not had any connection for more than six months, had a swelling in each groin, oblong, red, and fluctuating. No lesion of penis, scrotum, thighs, perineum, or anus could be discovered. In 1875, he had been treated by M. Mauriac for mucous patches of the scrotum and throat. The swellings were incised, and much thick offensive pus escaped. The wounds became phagedenic, and put on exactly the appearance of virulent buboes. Inoculation gave negative results. Under large doses of iodide of potassium internally, and the local application of iodoform, the sores healed completely. The inguinal swellings in this case were perfectly symmetrical. M. Mauriac has frequently observed the symmetrical development of gummatous formations, and was much astonished to find that Mr. Hutchinson regarded asymmetry as a distinctive character of tertiary lesions. M. Mauriac then ably criticizes various cases put forward by different observers as examples of bubon d'emblée, and comes to the conclusion that there is no satisfactory case on record. In a doubtful case, inoculation should always be practised, and, failing that, specific remedies should be tried.—*London Med. Record*, Dec. 15, 1879.

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Soldiers' Feet.

Under the title of "A Special Affection of the Feet in Railway Navvies, and a Tumour of the Feet occurring in Infantry after Forced Marches," Dr. DAWOSKY and Surgeon-Major WEISBACH of the German army describe one and the same affection, observed by the one in navvies employed on the railway, and by the other in foot-soldiers (*Deutsche Militärärtzliche Zeitschrift* and *Archives Médicales Belges*, April, 1879). This affection, characterized by a swelling of the upper part of the foot, with redness and heat, is accompanied by extremely sharp, lancinating, and burning pain. This pain constitutes the initial symptom, and commences at the sole of the foot, whence it spreads towards the middle of the top of the foot, and even as far as the knee and thigh. In navvies, this affection has shown itself more especially in the right foot; in some cases, however, both feet have become involved. In soldiers, Herr Weisbach has found it in both feet, and more especially pronounced and painful along the course of extensor tendons of the second, third, and fourth toes, as well as in the vicinity of the metatarsophalangeal joints of the same toes. Both writers attribute this affection to a change in the position of the foot, brought on in the case of navvies by the necessity of wheeling earth on narrow planks, on which the foot cannot spread itself out completely as in ordinary walking; in soldiers, by fatigue and muscular relaxation. This change has the effect of inclining the foot more inwards and throwing the weight of the body more outwards, thus causing contusion of the heads of the metatarsal bones and strain of the ligaments, especially the transverse ones, twisting them together. This continuous morbid action, becoming permanent, naturally ends by producing inflammation of these ligaments and of the adjacent tendinous sheaths, whence the affection, gradually spreading, soon shows itself in a more definite form on the upper surface of the foot, where the looser cellular tissue is more amenable to œdematous distension. Both authors recommend rest in the way of treatment above all things for the injured organ immediately on the appearance of the initial symptom, pain. Thus, the development of the affection may be arrested. Should it be completely established, M. Dawosky recommends multiplied scarifier irons round the affected portion, and even the opening of the superficial veins to induce a more copious hemorrhage. When

this has ceased, the patient should remain quiet for several days, and have recourse to cold water bandages if necessary. In the case of workmen who can be carried to a hospital in the vicinity, simple scarifications are replaced by cupping with the scarificator.—*British Medical Journal*, Nov. 29, 1879.

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Perforating Ulcer of the Foot.

Englisch (*Wiener Med. Jahrb.*, 1879, s. 81) has collected 109 cases of perforating ulcer of the foot, independent of those forms of ulceration arising in connection with leprosy, syphilis, and cancer. Five of these came under his own observation. He found that the frequency of this disease increases in regular proportion from the heel to the toes, but in its localization it keeps to the distribution of the bursæ mucosæ on the sole of the foot. So far this localization corresponds with that of callosities, which, however, in no way, as a comparison with ulcers or callosities on other parts of the body shows, imparts to the ulceration its specific character. After Englisch reviews the neuro-paralytic theory of the perforating ulcer, he comes to the conclusion "that it is an inflammatory and ulcerative process, occasioned by a peculiar change taking place uniformly in the vessels, which corresponds to the endoarteritis obliterans of Friedlander or proliferans of Billroth. With reference to the ultimate cause of this endoarteritis, Englisch observes that many authors state how an extreme chilling has preceded the disease, from which the frequent bilateral or symmetrical occurrence of the disease can be explained. Besides, Englisch agrees with Friedlander that, under the influence of the tuberculosis, also, changes of the skin and its vessels can be set up which present similar characters as the perforating ulcer, in particular its markedly chronic course, with a not unfrequently continuous rise of temperature. Englisch can, in relation to the age at which it occurs, well establish a predilection for the fifth decade, but no direct influence of more advanced years.—*Edinburgh Med. Journal*, Dec. 1879.

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On Amputation of the Hand in the Continuity of the Carpo-Metacarpal Joint.

Dr. Silvestri proposes (*Med. Contemporanea*, Aug. 1879) a new method of amputation of the hand in the continuity of the carpo-metacarpal joint, to which he gives the name of "the method by double palmar flap." He performs the operation as follows. The hand having been placed in the prone position, an assistant grasps the wrist, and makes the skin tense, while the operator traces a curvilinear incision, with its convexity downwards, through the skin and subcutaneous cellular tissue. This incision should commence and terminate half a centimetre below the tubercles which mark the upper extremities of the first and fifth metacarpal bones. It should include the skin, but not the deeper tendinous masses. The hand is now to be supinated, and a double palmar flap traced out, the external portion of which comprises the hypothenar eminence, the internal the thenar. The starting point of these incisions should be from 20 to 25 millimetres below the fold in the skin of the forearm, which marks the position of the radio-carpal articulation. They should extend downwards to the level of the interdigital fold of the thumb, and comprise the skin and palmar fascia, as far down as the layer of flexor tendons. The hand is now once more pronated, and the knife entered under the extensor tendons, which it divides transversely, commencing with those of the little finger. The cut ends of the tendons are next turned down, and the carpo-metacarpal articulation comes into view. After division of the radial extensors from above downwards, and of the insertion of the abductor longus pollicis, which are the best guides to the line of articulation, the joint may be partially opened on its dorsal aspect by one sweep of the knife.

The author uses the word "partially" advisedly, as it will be found impossible to dissociate completely the metacarpal bones of the last four fingers. This is owing to the existence of a hitherto undescribed interosseous ligament, which is attached superiorly between the two contiguous facets of the os magnum and unciform, and inferiorly between the two facets of the third and fourth metacarpal bones. It is a fibrous band, filling a longitudinal sulcus, especially designed for its reception. When this ligament has been divided, the joint at once falls open. The final step of the operation is to cut through the two fleshy masses of the thenar and hypothenar eminences, keeping the knife as closely as possible to the bones, and following the lines traced out in the early palmar incisions. The result is a double flap, which when laid over the stump will appear single, and will be found to adapt itself very accurately to the dorsal flap. The wound should be closed with sutures, and a drainage tube inserted in the radio-carpal canal, which will be more or less patulous, owing to retraction of the flexor muscles and tendons. As regards the objections which may be urged against the operation, the chief are (*a*) the difficulty of execution, and (*b*) a greater liability to inflammation and purulent infiltration, due to the presence of so many small bones and articulating surfaces in the stump. As to the former of these, the author holds it has no real weight, except in the case of very old subjects, in whom possibly the articulating surfaces might be ossified. As to the latter, it must be combated by careful antiseptic treatment. The advantages claimed are a greater length of limb, a skin-covering admirably adapted to bear friction or pressure, and a form of stump more suitable for the application of any artificial means of prehension. The memoir is carefully written, and accompanied by five lithographic drawings, which tend very considerably to elucidate the somewhat complicated steps of the operation.—*London Med. Record*, Dec. 15, 1879.

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Excision of Both Hip-joints for Symmetrical Femoral Necrosis.

At a late meeting of the Clinical Society of London (*Lancet*, Dec. 6, 1879), Mr. CROFT read the notes of a case of this in which the operation was performed antiseptically, and with a successful result. The patient, a child four years of age, was admitted into St. Thomas's Hospital on January 3, 1879. Two years previously she had fallen down stairs, and some months later began to limp and suffer from pain in hips and knees. For some time she was treated as an out-patient, but did not improve. She became thin and pale, and the cornea ulcerated; the thighs became flexed on pelvis, and legs on thighs; and in this state she was taken into hospital, when the limbs were straightened, and her health improved. At the end of February evidence of fluid in the left hip-joint was manifested, and some thick puriform fluid was evacuated by aspiration. The effusion re-collected, and on May 17th the left hip was excised antiseptically and subperiosteally. On June 17th the right hip was excised in the same way. The wounds healed in about five weeks from the time of operation. On each side there was extensive necrosis of the neck and head of the bone, the epiphysis being detached. There was also swelling of the synovial membrane.

The case illustrated the value of early operation before the third stage is reached; it showed also the security of antiseptics, the advantage of freely removing the diseased parts, and of leaving the muscles attached to the trochanter. The case was also interesting from its double and symmetrical character. Had not the operation been done early, the case would have gone on from bad to worse, the joints would have become anchylosed, and the chances of death from tuberculosis or amyloid disease would have been great. There was hardly any pyrexia after the operations, an important thing in cases of supposed tubercular disease. He largely attributed the good results to section of the femur through

undiseased bone, and the destruction of the synovial membrane by chloride of zinc. The glutei were not detached from the trochanter, which has now renewed its attachment to the shaft, thus permitting of good movement and avoiding bony anchylosis.

He had performed excision of the hip forty-five times; twenty-one were instances of necrosis of upper end of femur or of acetabulum. If the surgeon knows there to be dead bone in a joint, he is bound to remove it. He strongly condemned the practice of leaving these cases unexplored, and unrelieved. Cases of a subacute or chronic kind, traceable to injury, probably depended on osteitis, and he would say that when there is fluid in such a joint, an incision should be made antiseptically and the joint explored. When uncertain as to the state of the bone, the surgeon should excise, and if he were sure that necrosis had occurred, he had no other alternative than excision.

Mr. BRYANT said the case opened up the whole question of excision of the hip—as to the value of the procedure, the conditions calling for it, and also the pathology of joint disease. Clearly the case was one of osteitis, to which probably nine-tenths of the cases of hip disease in early life were due; whereas in adults the primary synovial form was more frequent. There could be no doubt as to the propriety of the operation, for whenever necrosis had taken place it should be the rule to operate early. But it could hardly be claimed that in this case the operation was done *very* early. The disease had arrived at a well-marked stage, and its course had been so marked and so rapid that no hesitation about operating could have occurred. He demurred to the operation being styled "subperiosteal." There was necrosis of the head of the femur, disorganization of the capsule of the joint, and the neck of the bone was quite denuded, so that only the trochanter could strictly be held to have retained its periosteum. He felt at a loss to know what surgeons meant by a "subperiosteal" resection under these conditions. The object of excision was to remove the disease. A stiff joint, with anchylosis, would not be a satisfactory result. It might, indeed, be hardly right to try to save the periosteum, if it were possible, and for himself he had often tried, but always failed, to strip off the fibrous covering of the trochanter, and he had come to regard the "subperiosteal" section as a fanciful thing. It would be otherwise if dealing with a normal joint; then a subperiosteal section would be possible. But to remove a healthy head of the femur would be an error. Mr. Croft had urged that when the joint was found to be full of fluid it should be cut down on antiseptically, and if the joint were then found to be healthy the surgeon should go no further. But he (Mr. Bryant) maintained that the joint should not be so treated, but that measures to obtain the absorption of the fluid should be tried. If Mr. Croft meant that they should not cut down into a joint unless there was strong evidence of its containing pus, the question would be different. The bulk of cases being due to disease of bone, resection should follow the incision into the suppurating joint. He followed this practice himself in most cases, but sometimes, when it is doubtful whether there is necrosis, he does not proceed to resection. He would like, then, for some further explanation as to the meaning of an "early incision" in these cases. As to definite stages of the disease, he did not recognize them. A stage of disorganization he knew, and a stage of open suppuration, but to speak of first, second, and third stages was unintelligible to him. The stage differs according to the cause of the disease—*e. g.*, in acute necrosis it runs through its whole evolution in the course of a few days.

As to resection of the hip, he was, as a rule, disappointed with its results. The cases of good result were very few as compared with a large class, in which a crippled limb, not fit for walking was left; and the even larger class already

doomed by the presence of visceral disease. It might be that surgeons were disposed to wait too long for Nature's processes, and thus cases came to excision too late, when lardaceous disease was already established, and this was a strong argument in favour of early interference. But *when* should the surgeon interfere? He was afraid that "antiseptic surgery" had induced surgeons to operate without necessity; an over-confidence in its safety disposed them to deal with joints too freely, and to resect joints which pathologically were curable. As a surgeon who had lived in the pre-antiseptic period, or rather before the introduction of the protecting spray, he could not help asking himself if some of the cases could not have got well had they been left to nature? He feared that Mr. Croft had fallen into the new system; and he could not but think that Nature was competent to absorb serum effused into a joint.

Mr. HULKE congratulated Mr. Croft on the brilliant result of his case, although he could not assent to his deductions. If there was one lesson to be gained from observation of these cases more than another, it was this—viz., the necessity of giving the joint complete and absolute rest from the time of the very earliest manifestation of disease. The present case was for some months treated as an out-patient, and during that time the joint could not have had that complete immobility so essential for its recovery. He had again and again seen joints suffer from the non-observance of this principle. He believed that disease of any joint in the body in childhood commenced as an osteitis almost invariably. As to operative interference, he would concede its being called for whenever the presence of necrosis extending into the joint could be established, but of that occurrence he knew of no strict indication. He agreed with Mr. Bryant on the question of opening joints when there was a presumption of fluid in them; and even when there was pus he had seen instances (both of knee and hip) where free incisions and thorough rest, as first pointed out by Mr. Gay, resulted in the retention of free mobility to the joint. He also felt with Mr. Bryant as to the general outcome of excisions of the hip-joint; but, of a large percentage of survivals, he knew of few where a useful limb resulted. For, if these cases were watched for a series of years (an observation falling less to the lot of the hospital surgeon than to that of the general practitioner), it would be found that so great a dwarfing of the limb resulted as to render it almost useless. On the other hand, it must be borne in mind that excision was done, uot merely to save the limb, but to preserve life. He also felt strongly the cogency of Mr. Bryant's remarks upon "subperiosteal" resection. He had always followed the old rule, instilled into him by his German teachers, to keep as close to the diseased bone as he could, and he did not see how this were possible if periosteum were stripped off the healthy shaft in order to divide tlfis at a point below the disease. He had listened to Dr. Sayre's advocacy of the subperiosteal method, without, however, satisfying himself that the operation described strictly embodied a preservation of periosteum. In conclusion, he thought that the joint in these cases should be very early and completely fixed, and in that way many acute and subacute cases would do well. He recalled one case of *peracute* inflammation, which subsided under these measures and the local application of ice. Early immobilization, then, if practicable; but if the case were taken too late for this, and if, in spite of such immobility, fluid accumulated in the joint, and that, too, pus, free incisions and drainage should be resorted to. He had never seen anything but harm come of the use of the aspirator, for it invariably became plugged with flocculi of concrete pus in these cases. Then, if there be reason to believe that necrosis existed, there was no doubt whatever that the sooner excision was performed the better.

Mr. PARKER agreed with Mr. Hulke in congratulating Mr. Croft on his very

successful case. It was so successful that there was nothing to which one could take exception as respected that particular case. He could not quite agree with Mr. Croft in regarding it as an early operation, for the child seemed to have been ill two years at least. Mr. Hulke advocated rest, but he (Mr. Parker) had been disappointed in the ultimate result of this plan of treatment. He had now under care in the East London Children's Hospital two or three cases which had continued to progress although complete rest had been given during two or three months, and in one of these cases disease in the other hip had occurred spontaneously during this treatment by rest. Regarding the general question of treatment by operation, it was disappointing that Mr. Croft, out of his abundant material, had not given the Society the benefit of a critical analysis of his results and experience. It would, probably, have contained much useful information bearing on the diagnosis of the various forms of the disease, and to young surgeons such information would have been very valuable indeed. It was just his own difficulty to know when to operate and when not to operate. There was room for a better classification of the cases. Some tended, no doubt, ultimately to recover, while others just as certainly, in spite of all treatments, tended to progress, and it was very desirable to differentiate the cases in order to adopt the most appropriate treatment in each. Out of seven or eight excisions he had found in five instances the head of the bone loose as a sequestrum in the acetabulum. It would be well if those who had large experience would give younger surgeons the benefit of it. Again, he thought that the methods of operation at present in use were not the best, and that a more surgical method might be adopted. By making an incision from the anterior superior spine downwards along the anterior border of the great trochanter, cutting between sartorius and rectus on the inside, and the anterior edges of the tensor and the two smaller glutei muscles on the outside, a patch of the anterior surface of the capsule would be exposed, and no muscular fibres would be cut across; the neck of the bone is to be sawn across *in situ*. This avoids the necessity of forcibly wrenching the femur out of its socket, in order to saw off the diseased portion, a proceeding by which the periosteum was largely separated from the bone.

Mr. HULKE thought for Mr. Parker to have found, in five out of eight cases, the head of the bone as a sequestrum, was a singular experience.

Mr. BRYANT also thought it curious that so large a proportion of such cases should have fallen to Mr. Parker, and that they ought to be recorded.

Mr. HUTCHINSON'S experience as to the rarity of detachment at the epiphysis was similar to that of Mr. Bryant and Mr. Hulke. He had only met with three or four such cases. Again, the condition he had most often found was one of caries rather than necrosis. He agreed with Mr. Bryant and Mr. Hulke as to a general feeling of disappointment at the issue of cases of hip-resection, and he had never been an enthusiast for the operation. He had seen a certain number of failures, and a certain number in which only partial success was obtained; whilst several of the cases, most successful as regards the limb, had died of lardaceous disease, and he agreed that this fact was an argument in favour of early operative interference. At the same time he was quite sure of the success frequently attending milder measures, as Mr. Hulke had shown. Complete rest by plaster-of-Paris bandage, and, if possible, sea-air, also greatly aided recovery. He felt sure that a far larger number of cases would be successfully treated if they could be transferred to the seaside instead of being kept in a London hospital. Counter-irritation was also very valuable, especially in cases where there was fluid effusion. Rest combined with counter-irritation often alone sufficed, and as a counter-irritant he would mention tincture of capsicum, the use of which he learned a long time ago from a practitioner who was little better than a char-

latan. He also wished to congratulate Mr. Croft on the happy result of his case —one of the most successful he had seen.

Mr. H. MARSH pointed out that the chief interest lay in the question of the value of excision in hip disease, and he could not but agree with Mr. Hutchinson as to the disappointment often accruing from the operation. He had seen about 120 cases of excision, and thought it would be difficult to show six or seven which had turned out really well. Mr. Croft might reply that this was because the operations had been too long deferred, and that they were not performed antiseptically. It might be so, but so convinced was he of the general failure that it was with the greatest aversion he resorted to it. At St. Bartholomew's Hospital it was an operation now rarely performed. Wide conclusions should not be drawn from a single case. If one was fortunate enough to come across a case in which the head of the bone was detached so that it could be removed as a sequestrum, it did not require any division of bony tissue. He suggested that Mr. Croft should show the case again at a later period. He (Mr. Marsh) agreed with those who had said that necrosis was rare, and that caries was the prevailing condition, for in operating, as a rule, it is carious bone that is cut through, and in many cases he had seen operated on it would have been impossible to have got beyond the inflamed bone without dividing the shaft low down. He believed that early recourse to treatment by perfect rest and counter-irritation would be successful in the majority of cases. He could show many cases of hip-joint disease which had recovered, with fair mobility and walking power, after having been widely suppurating. It must be remembered that Mr. Croft's patient was now much in the condition of children who have congenital dislocation of the hips. He differed from Mr. Hulke in his opinion of the aspirator. By using a sufficiently large trocar he had frequently evacuated large accumulations of pus, with recovery.

Mr. CROFT, in reply, said that in speaking of an early operation, he did not mean one undertaken in the early stage of the disease, before there was perceptible effusion. He fully recognized this incipient stage, and had been as successful as others in treating the disease when it came under his notice at that time. The case he had brought did not illustrate the treatment he should pursue in the very early stage. The accident which started the disease had occurred two years before the child's admission into hospital. The divisions adopted by Sayre and others were very useful clinical divisions, although they might not be pathologically accurate, any more than it was pathologically correct to speak of "primary," "secondary," and "tertiary" syphilis. Still it might be said that the first stage of hip disease was that which commenced with the onset of inflammatory signs and ended in effusion; the second, from effusion to the formation of open abscesses; and the third thence *ad finem*. His case, then, was in the second stage. He had confidence in antiseptics, for he held that a system by which a surgeon could extirpate a loose cartilage from the knee-joint, and send the patient out cured in ten days, was enough to inspire confidence; and under the protection afforded by this system the surgeon was fully justified in freely opening into a joint containing fluid. Probably he would find the fluid purulent, and evidences of pulpy degeneration and of necrosis; but if he did not, no harm would ensue. He would indeed have relieved the symptoms, especially the symptom of *pain*. The term subperiosteal was the most convenient he had to describe what was done. He could demonstrate the possibility of tearing out the great trochanter and leaving the whole of the periosteum behind. Of course the term was not applicable to the head of the bone, but it was strictly so to the neck; and if the bone be turned out, leaving periosteum, the removal is subperiosteal. Antiseptic treatment must be complete, or it is nothing. The key to the disappointment

expressed as to the general results of the operation was, that the operation was not performed early enough. His forty-five cases included four at present in hospital; fourteen sound and well; fifteen had died from one cause or another, two of them from pyæmia (but not since he had used antiseptics), one from diphtheria, and the rest from tuberculosis in one form or another. He did not know of any certain indications of necrosis, and he sometimes aspirated joints to confirm the diagnosis of purulent effusion. He thought aspiration for serous synovitis was often followed by a favourable result. He did not wish to draw wide deductions from one case; and he had already shown that his opinions were based on a larger experience. The child could not yet balance herself on the femora; but he anticipated that, as the periosteum had been left, new bone would form and a kind of joint be reproduced. He would be well satisfied if he had induced some surgeons to operate early in hip disease.

Attempted Reduction of a Dislocation at the Shoulder-joint of seven or eight weeks' standing; Rupture of a Bloodvessel.

At a recent meeting of the New York Surgical Society (*Med. Record*, Jan. 10, 1880), Dr. H. B. SANDS reported the following case. Four weeks previously he was called by Dr. Rockwell, of Brooklyn, to see a lady eighty-six years of age, who, seven or eight weeks previously, had had her right shoulder dislocated downwards. She was seen by a gentleman in Connecticut soon after the accident, and he reduced it without special difficulty. About ten days afterwards the dislocation was reproduced, and then nothing was done towards placing the head of the bone in position until she came to Brooklyn, when Dr. Rockwell made a slight attempt to restore it to its place, but without success. Dr. Sands was asked to give an opinion regarding the propriety of making an effort at reduction, and he said that he regarded it as dangerous, and advised against it, but that if the friends and the patient desired, he would make a moderate attempt to put the bone in place. The lady expressed her desire and willingness to have something done; so she was anæsthetized with ether, and what he regarded as a very moderate effort to reduce the dislocated bone was begun by putting the left hand in the axilla, while with the right, using the arm as a lever, movements usually resorted to in breaking up adhesions were made. Evidently some of the adhesions did rupture, and after continuing the movements for three or four minutes, a sheet was placed around the patient's waist, and held from the opposite side by Dr. Rockwell's wife, while slight traction was made upward and outward, no towel being used for the purpose. The amount of traction was nothing like what he should have regarded as prudent to make, when it was stopped in order to readjust the band about the waist. While arranging to make a second attempt—five or six minutes—he thought he perceived a swelling in the axilla, and called Dr. Rockwell's attention to it, who thought it merely superficial and caused by the pressure from the bandage, and found what to him seemed to be the same condition upon the opposite side. Dr. Sands, however, removed the sheet, when it was very apparent that a bloodvessel had given way; there was a quite rapid increase of the swelling in the axillary region, and it was very soon as large as the head of a child at term. There was no pulsation in the radial, the ulnar, or the brachial artery. Feeling very certain that some large bloodvessel had ruptured, he was apprehensive regarding the ultimate result. Nothing in the way of treatment was done except to place the arm by the side and apply a bandage, but within half an hour the skin in the axilla had begun to show discoloration, and within a few hours the discoloration was very marked and extended up to the shoulder. The patient was excessively prostrated by the accident, and

at one time it seemed not improbable that she might die from syncope. Hypodermic injections of brandy were given, and brandy by the mouth as soon as it could be swallowed, but she remained in a very low condition for several days, especially at night. In the course of the next day after the accident the extravasation gave signs of its presence quite well, down upon the side of the chest, and later it could be readily seen upon the side of the body as low as the side of the pelvis. The discoloration behind covered nearly the entire scapular region. There was neither fluctuation nor murmur over the region of extravasation. Nothing more serious had as yet occurred; there had been gradual improvement, and although pulsation had not returned in any of the arteries of the right arm, the limb presented no unfavourable appearance. The patient made no special complaint, except with reference to a very uncomfortable tingling, at times, along the distribution of the ulnar nerve. He thought that no other vessel except the axillary artery was ruptured, was gratified at an unexpected recovery from so dangerous an accident, and was surprised that such a rupture should occur from the use of so slight an amount of force. There was no interference with the general nutrition of the limb.

Midwifery and Gynæcology.

Cæsarean Section performed on Account of Cancer of the Rectum.

The following case is related by Dr. KALTENBACH in the *Zeitschrift für Geburtshülfe und Gynäkologie*, B. iv. H. 2: The patient was thirty-seven years old, and had had eight previous normal deliveries, the last three years before. The only symptoms of the disease had been pains in the back and difficulty in defecation during the last two months of pregnancy.

Labour came on at full term, and the child presented by the breech. The author was only called in after three days and a half, when neither the natural efforts, nor attempts at extraction, had succeeded in effecting delivery. The patient then showed all the signs of commencing exhaustion; the pains had ceased, and the fœtus had died. The vagina was found to be obstructed about 3 to 4 cm. above its outlet by a firm, somewhat nodular, tumour, as large as the head of a six or seven months' fœtus, which pressed it forward. Rectal exploration showed that the tumour was immovably fixed to the lower part of the sacrum. There remained only a space of 4 cm. between the tumour and the symphysis.

The author operated, under unfavourable circumstances, with such antiseptic precautions as could be carried out by the use of a solution of chlorine. The placenta was found attached in front, and it, as well as the fœtus, showed signs of commencing decomposition. Some vessels in the uterine wall had to be secured to arrest hemorrhage, and the uterine wound was closed with fifteen silk sutures. The patient was in fair condition after the operation, but died on the sixth day from septic peritonitis.

At the autopsy the uterine wound was found to be gaping widely, but no hemorrhage had occurred. The tumour proved to be a medullary carcinoma, commencing from the rectum, which had grown posteriorly to that viscus, and was attached to the sacrum and ischium.

The author ascribes the failure of union in the uterus, and the gaping condition in which the wound in it was found, not to the effect of the uterine contraction, but to the access of septic material, which prevented the chance of primary union. He now regrets that he did not operate according to Porro's method, ex-

cising the whole uterus with the ovaries, and fixing the stump in the abdominal wound.—*Obstetrical Journal of Great Britain*, Jan. 1880.

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Puerperal Aphasia.

Sudden loss of speech after delivery is so rare that Kussmaul does not mention a single case in his work on the *Disturbances of Speech*. A Polish physician, Dr. LEWANDOWSKI, has published a case which came under his observation in the *Medycyna* (No. 38, 1877); and the reporter of his observation in the *Allgemeine Medicin. Central-Zeitung* (No. 33, 1879) adds another which he saw in Paris in 1873. In Dr. Lewandowski's case, the patient had, thirty-six hours after she had been delivered of her tenth child, eaten a basin of broth and a piece of cake. The next day, she had repeated rigors, and complained of heat, cephalalgia, and sleeplessness. In the tenth night after delivery, the patient suddenly began to scream, utter unintelligible and disconnected words; repeatedly putting her hand to the left side of her head. She was perfectly conscious, but could give no answer to questions. Her pupils were equal in size; there was photophobia, but no symptoms of paralysis. Eight leeches were applied behind her ears, and chloral-hydrate given internally. The next day, she could say "No;" and in three days had recovered the power of speaking and writing. The second case is still more interesting, as the reporter was present at the *post-mortem* examination. The patient had been delivered without much trouble, and did well for about a week. On the ninth day, rigor, headache, and pyrexia set in. During the next four days, she suffered from slight tetanic convulsions. In the following days, she retained consciousness, and could move freely her limbs and tongue, but had lost the power of speech. Nothing abnormal could be detected. During the following three days, convulsions and somnolence alternated. She did not regain consciousness, and died on the seventeenth day after delivery. At the *post-mortem* examination, inflammation of the brain and its convolutions was found to exist. In the left anterior convolution was a partly decomposed focus of the size of a nut, surrounded by minute hemorrhages. Several purulent foci were in the lungs, and two purulent foci in the uterus beneath the mucous membrane, and suppuration of the veins of the ovario-uterine plexus.—*British Med. Journal*, Oct. 11, 1879.

In a Clinical Lecture upon Loss of Speech, Dr. FINLAYSON relates (*Glasgow Med. Journal*, Sept. 1879) two cases in which aphasia, consequent upon right hemiplegia, came on after parturition. In neither patient was there any evidence of valvular disease of the heart; neither of them had any history of rheumatic fever, and the age of the first woman was thirty-five, of the second thirty-nine. It may be concluded, therefore, that the mischief was due to the tendency which puerperal women have to the formation of clots in their vessels, and so to the subsequent occurrence of embolism in various forms. The recurrence of the attack in both of the cases is remarkable.

The first patient had been seized suddenly, ten days after her second confinement, three years ago, with slight paralytic symptoms in the right side, and with very complete loss of speech; she had, however, made a partial recovery, and was able to say "Yes" and "No," and a few isolated words as required; but after her next confinement, in November, 1878, she lost her speech completely. The affection of the fingers in the right hand is limited to a little numbness and weakness, and is not at all considerable. She can protrude her tongue quite well, but its movements are perhaps somewhat impaired. She is now absolutely speechless, except that she frequently gives a little cry like "Ah." She is able, however, both to read and also to understand spoken words, and can write short replies consisting of a few words.

In the second patient the first attack of right hemiplegia and aphasia occurred suddenly in her ninth confinement, about three weeks after natural labour and convalescence. She then regained speech in a few days, at least to a considerable extent, the hemiplegia passing off in about three weeks. The second attack occurred after the next labour, two years later; the child, when born, was apparently in a state of incipient decomposition, and her labour seems to have been tedious and her recovery slow. The paralytic seizure occurred suddenly about the twentieth day, and the attack was associated with involuntary passing of urine and motions. Her general appearance was indicative of debility and anæmia. The hemiplegia now, after the lapse of four months, appears likely to be permanent, as extreme rigidity has supervened. An almost complete loss of speech also persists. She can, however, say "Ay" and "No," and uses these words correctly as a rule. She also utters a longer jabber of incoherent sounds, and has occasionally said some words, and even short sentences, by accident, as it were, so that it was clear that she had no physical defect in the matter of mere articulation. She seemed, after a time, to understand the words addressed to her very correctly.—*Obstetrical Journal of Great Britain*, Jan. 1880.

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Intra-Uterine Vaccination.

The question whether it is possible to render the fœtus *in utero* insusceptible of smallpox by vaccinating the pregnant female, has been examined by Dr. A. E. BURCKHARDT in the *Deutsches Archiv für Klinische Medicin*, Band 24. Attention was previously directed to the subject by Professor Bollinger of Munich, in his article on Human and Animal Vaccine, published in Volkmann's *Sammlung Klinischer Vorträge*. He suggested that, as the poison of smallpox was known to be capable of transmission from the mother to the fœtus, a similar condition might be found to exist with regard to vaccine; and that this was supported by the number of cases in which insusceptibility of infants to vaccination might be traced to the revaccination of the mothers during pregnancy. The results of some experiments on sheep also pointed in the same direction. Rickett inoculated about seven hundred pregnant ewes during the last four to six weeks of gestation with *variola ovina*. Their lambs were inoculated when from four to six weeks old with good sheep-pox lymph; no result followed in any case, while thirty-six other lambs treated in the same way had very fine pustules. A similar observation has been made by Roloff. The only observation on the human subject, according to Dr. Bollinger, is that of Underhill, who found, after successfully vaccinating a woman in the eighth month of pregnancy, that vaccination of her infant with recent lymph in the third and fourth months produced no result. Dr. Burckhardt's researches were carried on in Dr. Bischoff's obstetric wards in the hospital at Basel. 1877 and 1878, he revaccinated twenty-eight pregnant women. From various circumstances, however, such as still-births, early removal of the children, etc., only eight of the children were available for observation. To test the accuracy of his results, he vaccinated four children whose mothers had not been vaccinated during pregnancy, and in all produced fine pustules. The results with the children of the vaccinated women were these. 1. The children of four women who were successfully revaccinated during pregnancy were all found to be insusceptible of the vaccine virus. One of them was still insusceptible at the end of half a year; while the lymph employed in the other three cases was used successfully in other children. 2. The children of two mothers who had been revaccinated with partial success were both found insusceptible of vaccination. One of the test children was vaccinated successfully, the other without effect—but perhaps the lymph used in this case was too old. 3. Of the children of two women

who had been unsuccessfully revaccinated, one was vaccinated without result, while the operation in the other was successful. The mother of the latter had been revaccinated successfully five years previously. Dr. Burckhardt has made some observations on the subcutaneous injection of vaccine lymph, taking for the purpose a sufficient quantity to vaccinate six or eight persons in the ordinary way and mixing it with a drop of distilled water. The injection of this into the subcutaneous tissue of pregnant women was not followed by local reaction or general disturbance. He treated ten women in this way; but only two of the children were available for experiment. Both were found to be insusceptible; while two other children, vaccinated with the same lymph, had good pustules. Dr. Burckhardt considers it too soon to arrive at any positive conclusions and remarks that the value of the process can only be decided by the results obtained by a number of independent observers.—*British Med. Journal*, Nov. 22, 1879.

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The Results of Freund's Operation for Total Extirpation of the Cancerous Uterus.

The mortality of this operation appears to have been greater in the more recent than in the earlier cases reported. In the hands of the author, three of the first five patients recovered from the effects of the operation, and two of the second five, making a mortality of 50 per cent. in the first ten cases. In a Paper read at the meeting of the International Medical Congress at Amsterdam, in September, 1879, Dr. FREUND gives the results of four more operations undertaken since the end of 1878. In one patient, who was enormously fat, he found it necessary to give up the operation after having opened the abdomen. The patient recovered from the effects of the incision. Funnel-shaped excision of the cervix was afterwards performed, but the growth recurred in two months.

The other three patients all died; the first, at Erlangen, in the Clinic of Professor Zweifel, from peritonitis, after four days. The second, in the Clinic of Dr. Schrœder, did well for a week, but died after twelve days. The peritoneal borders of the wound were found covered with pus. The third, at Strasburg, in the author's own Clinic, died from shock, the operation having been undertaken when symptoms of commencing peritonitis had appeared from the carcinoma breaking through into the pouch of Douglas.

The author admits that the results of the operation cannot be expected to improve as those of ovariotomy have done, since, from its commencement, it has had the benefit of the antiseptic method. In view of the increasing mortality, he thinks that a too great liberality has been shown, both in the choice of cases, and in the introduction of modifications of the first method of operating. He intends, however, in future to adopt the plan of permanent irrigation of the vagina after the operation.

Of the five successful cases previously reported by the author, two have since died, one from recurrence of cancer, one from acute pleurisy. A third patient has a recurrence of growth. The author is now of opinion that the operation should be limited to cases of glandular carcinoma of the cervical canal, and that those of ordinary epithelioma or cauliflower excrescence of the cervix, or those in which the growth has reached the outer surface of the cervix, are not suitable for it.—*Obstetrical Journal of Great Britain*, Jan. 1880, from *Centralblatt für Gynäkologie*, Oct. 11, 1879.

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Ovariotomy following Incision and long Drainage.

At a late meeting of the Medical Society of London (*Lancet*, Dec. 13, 1879) Mr. KNOWSLEY THORNTON read a paper on Ovariotomy following incision, long

drainage, and supposed cure of ovarian tumour. The paper was a record of three cases of ovarian tumour, in which exploratory incision, followed by drainage of the cyst, with injections, had been employed for two of the cases, and injections for the third. All were supposed to be cases of cure of ovarian tumour without ovariotomy. In all re-growth took place, and the author of the paper eventually removed all successfully by ovariotomy. The periods between the first operations and the successful ovariotomies were respectively four years, three and a half years, and eleven years. All these operations were complicated by serious adhesions, and all the cases presented features of special interest, apart from those common to all. In some concluding remarks the author referred to the special features of interest as follows: It is very remarkable that two of these cases should have survived such grave dangers as the sponge being left in and secondary hemorrhage, after also escaping the almost equal dangers of tapping and drainage. The fact of a sponge being left in the peritoneum was by no means the solitary example of this accident in ovariotomy, but this was the first recorded case in which recovery had followed its removal. The author had twice before had hemorrhage from slipping of a ligature, but neither case recovered, and among many similar cases he had heard of in only one was the patient's life saved, and in that case the hemorrhage was discovered and stopped almost directly after the operation. He attributed recovery in his own case entirely to the antiseptic method, and he called attention to the striking difference in the rapidity of the recoveries in the two aseptic cases as compared with the putrid case, the grave accidents to which the former cases were exposed merely accentuating this difference. In all three cases the steady progress was much aided by regulating the temperature with the ice-water cap. The cases, taken together, teach two important lessons: 1. The thoroughly unsatisfactory nature of the so-called cure by tapping and drainage; a lesson which the pathology of ovarian tumours might teach without surgical experiment. 2. The important fact that cases which have been treated by this unscientific method may still be successfully dealt with by the major operation of ovariotomy, even though many years have elapsed since the supposed cure. Other points of interest were: the entire absence of adhesion between the cicatrix and parietes in Case No. 1; the method of dealing with very firm adhesion to intestine; certain points as to antiseptic operation in presence of putrid sinus; the entire absence in Case No. 3 of any sign of the entire rupture of the linea alba, which had taken place at the time of the former operation; the danger of trusting to a single ligature, however small the pedicle; and the importance of not being hurried into opening the abdomen without the spray in a case of secondary hemorrhage into peritoneum.

Mr. DORAN said that the reason why drainage was unsuccessful in these cases is because it is required to act contrary to the laws of gravity. The reason was well seen in the rapid evacuation and cure of abscesses connected with the urethra.

Dr. WILTSHIRE said these cases showed the folly of attempting to cure ovarian disease by tapping and drainage. He thought when the cyst-wall was too firmly adherent to the bowel for removal, that the epithelial layer of the cyst should be carefully dissected off. He knew of a case where fatal hemorrhage occurred from a vessel in the pedicle being pierced by the sharp-pointed needle used in transfixion. In this case the pedicle had been tied in two halves, thus leaving the punctured vessel gaping. He agreed that many cases were now successfully treated by the aid of antiseptics which would not do without them.

Mr. THORNTON, in reply, wished that all misfortunes in surgery could be brought before the profession. He agreed with Mr. Doran's remarks about drainage. The adhesions in these cases were merely secondary, and the pedicles were long and would not have presented any difficulty to primary ovariotomy.

He thought the slipping of the ligature was due to the contraction of the muscular tissue of the pedicle. To prevent this the pedicle should be transfixed before ligation, for which he always used a sharp needle, spreading out the pedicle to prevent the possibility of puncturing a vessel. Many cases supposed to be cured by tapping and drainage are really only temporarily relieved.

Medical Jurisprudence and Toxicology.

Carbolic Acid Poisoning through the previously Healthy Skin.

Dr. EDWARD ZILLNER, assistant to the Professor of Medical Jurisprudence at Vienna (*Wiener Med. Wochenschrift*, No. 47, 1879) relates the following interesting case: A young child of fourteen months was trying to raise itself up in the street by means of a can belonging to one of the municipal "disinfecting officers," which contained about a litre of 30 to 40 per cent. carbolic acid solution. In so doing it upset the contents of the can over itself, so that nearly the whole of the front of its trunk and extremities were wetted by the acid. The accident happened on June 30 at 3 P. M., and the child was almost immediately after taken to the hospital. It was deeply comatose, with a very weak, uncountable pulse. There were abundant rales over both lungs. It died without recovering consciousness at 4 A. M., July 1. No smell of carbolic acid could be detected in any of the organs of the body at the autopsy, but the urine contained whitish flocculi, and on the second day had turned of a dirty brown colour, while Professor Ludwig detected carbolic acid in it on chemical analysis. The coma could not be accounted for by any injury to the head or any disease of the brain. The bronchial catarrh appears to have been an affair of some standing, the child being also rickety and delicate. Dr. Zillner gave it as his decided opinion—a judicial inquiry having been opened—that the carbolic acid was the cause of death; but a second physician ascribed the latter to the bronchitis. A third, however, appointed as arbiter, entirely agreed, as most people would probably be inclined to do, with Dr. Zillner. The case is nearly, if not quite, unique as an example of fatal carbolic acid poisoning in an individual whose skin was previously quite healthy. A very similar case has been published by Sandwell (*British Medical Journal*, October 8, 1870), but the child was ill at the time with pleurisy and intestinal catarrh, and may have succumbed to them. Dr. Wicke, of Göttingen (*Deutsche Klinik*, 1869, Nos. 19 and 20), records a case in which a patient died a few minutes after carbolic acid had been painted on his scalp, but here the skin had been affected for twelve years with favus. One point in Zillner's case deserves notice—the large amount of ante-mortem coagulation of the blood. As a rule, the blood remains fluid after carbolic acid poisoning. The only exceptions appear to be those cases where, as in Zillner's, the agony is much prolonged.—*Med. Times and Gazette*, Dec. 20, 1879.

MEDICAL NEWS.

The Pathology of Yellow Fever.—The Havana Yellow Fever Commission of the National Board of Health have just issued their preliminary report, from which we learn that the microscopical investigations of the Commission lead them to the belief that in yellow fever the white blood corpuscles undergo a process of fatty degeneration, but they failed to find in the blood any organism which can be considered pathognomonic of the disease.

From this report it also appears that yellow fever must be considered as endemic in the Island of Cuba, and that for many years it has prevailed annually in the principal ports. The facts presented do not confirm the theory of the spontaneous origin of the yellow fever poison on board ships, and make it improbable that the cleansing of the harbor of Havana and the constant removal of its waters, however desirable, would prevent the infection of the shipping at this port.

Health Reports.—Deaths from smallpox have been reported in New York, Philadelphia, Washington, Chicago, and San Antonio. The disease has existed for some time along our borders—for example, at Montreal, St. Johns, N. B., Havana, and Matamoras—and in the principal cities of Europe. Upwards of 250 deaths have been reported at Paris since August 21st.

Measles are very prevalent in New York, Brooklyn, and Chicago. *Scarlet fever*, although declining, is widely spread through the Atlantic States as far south as Baltimore, and extends to the Mississippi in the country north of the Potomac and Ohio rivers. The largest mortality prevails at Providence, Baltimore, and Cleveland. *Diphtheria* and *croup* find a number of victims in Boston, New York, Brooklyn, Philadelphia, Chicago, and Kansas City.

Relation of Diarrhœa to Temperature.—The unusually cold and damp summer experienced in Great Britain last year has resulted in an extraordinary reduction in the number of deaths from diarrhœa. We see it stated that at Birmingham, where the mean temperature was 2.6° lower than that for the corresponding period of 1878, there were only 81 deaths from diarrhœa last July, August, and September, against 534 in those months in 1878.

A Confession of Faith.—The *Lancet* (Dec. 20, 1879), in a carefully written editorial, announces its conversion to antiseptic surgery, and makes the following avowal of faith: "After the most careful consideration of the subject, we believe Listerism has undoubtedly diminished the mortality and the danger to patients situated under unfavourable hygienic conditions, after surgical operations; and holding this belief, we may argue from the greater to the less, and assert our conviction that this same system is capable of preventing septo-pyæmia in patients under almost all circumstances. We hold therefore that Listerism is destined to be the surgery of the future; for, however difficult the details or length of time required to carry out these principles in individual cases, it must and will prevail, because it guards our patients from unquestionable dangers."

Deaths from the Inhalation of Ether.—The *Canada Lancet* (December, 1879) reports a case of sudden death from the inhalation of ether, which occurred at

Aylmer, Ont., a few weeks previously. Scarcely an ounce of ether was administered for the purpose of extracting a tooth. The coroner's jury found that the death was due to paralysis of the heart caused by the inhalation of ether. Another case is reported at Providence (*Boston Med. and Surg. Journ.*, Jan. 15, 1880), in which the ether was given to facilitate the diagnosis of an injury to the hip. After inhalation for about fifteen minutes the man suddenly ceased to breathe. The autopsy showed effusion of serum beneath the arachnoid, valvular disease of heart, and cystic degeneration of the kidneys.

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Deodorization of Iodoform.—According to M. Constantin Paul, iodoform can be deprived of its odour by essence of mint, six drops sufficing to deodorize thirty grammes of iodoform. Dr. Lindemann prefers oil of cloves, or balsam of Peru.

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Recommendations to Congress of the National Academy of Sciences in reference to the National Board of Health.

In accordance with the Act establishing the National Board of Health, the National Academy of Sciences appointed a committee, with power to act, to confer with the National Board of Health as to a plan for a permanent public health organization. The conference was held at Washington in the latter part of December, and resulted in the following recommendations to Congress:—

1. That for the present no change be made in the plan of organization of the National Board of Health.

2. That the Board be authorized to confer on an Executive Committee such of its powers and duties as it may deem advisable.

3. That the Board continue its special investigations; and that, in addition to those already undertaken, there should be included investigations upon cholera, malaria, typhoid and typho-malarial fevers, diphtheria, and cerebro-spinal meningitis. There should also be carried on sanitary surveys of places remarkably unhealthy or liable to become so.

4. That the National Board of Health should take steps to secure, as far as possible throughout the country, uniformity in the methods of collecting and reporting vital statistics; and that, to this end, it should call a convention of representatives of United States, State, and local authorities engaged in the preparation of such statistics.

5. That the Act to prevent the introduction of contagious and infectious diseases into the United States should be so amended, that, in order to inforce the penalties provided for vessels which shall enter ports of the United States in violation thereof, it shall not be necessary to show that the port of departure was at the precise time of departure of such vessel actually infected with contagious or infectious disease; nor that ten days' official promulgation in the port from which said vessel sailed should have been effected.

6. That the National Board or its Executive Committee shall report to the President when any given city or locality is considered to be dangerously infected; and that, upon the official publication by the President of such report, the transportation of goods or persons from the place thus proclaimed as dangerously infected into other States shall be forbidden, under penalties to be imposed under the jurisdiction of United States courts, unless such transportation is carried on in accordance with the rules and regulations approved by the National Board of Health.

7. That the President be authorized to call an international sanitary council, to meet at Washington, D. C., at which the several powers having jurisdiction of ports likely to be infected with yellow fever shall be invited to send delegates for the purpose of securing an international system of notification as to the actual

sanitary condition of the ports and places under the jurisdiction of such powers, and of all vessels sailing therefrom.

8. That the National Board of Health at once establish quarantine stations near the mouth of Chesapeake Bay and in the vicinity of Ship Island in the Gulf of Mexico; that these stations be provided with all the buildings, wharves, boats, and apparatus for properly treating an infected ship, including passengers, crew, and freight; and that they be kept up and managed by the National Board of Health.

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Sanitary Convention at Detroit.—The first of a series of sanitary conventions was held at Detroit, on January 7th and 8th, under the auspices of the Michigan State Board of Health. A feature of the convention was an exhibition of sanitary appliances with the view of bringing them more prominently to the attention of the public. There was no fee of admission or premium offered for competition.

A number of popular papers on sanitary subjects were read. Dr. V. C. Vaughan, of Ann Arbor, read an interesting paper on "The Contamination of Drinking Water by Infiltration of Organic Matter through the Soil," which elicited from Dr. Kedzie the statement that he had examined a large number of wells in Lansing, where typhoid fever has prevailed to an alarming extent, and in every instance had found the well water contaminated with decomposing organic matter; and that in Grand Rapids, where one of the cemeteries is right in the midst of the city, underlaid with a bed of impervious clay, sloping towards the wells on a certain street, every family in the vicinity had had the typhoid fever, from which many had died.

Papers were also read on "Light in the Public Schools," "Prevention of Pulmonary Consumption," "Ventilation," "School Hygiene," "Water Filters," "Adulteration of Food," "Cooking Schools," "Cosmetics," and other subjects.

This plan of arousing an interest in, and of popularizing, sanitary knowledge, which has been initiated by the Michigan Health Board, is admirably calculated to effect the object, and is worthy of general adoption.

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American Public Health Association.—At the seventh annual meeting, held at Nashville, in November last, the following officers were elected for the ensuing year: President, Dr. John S. Billings, U.S.A. Vice-Presidents, Drs. Samuel Choppin, of Louisiana, and R. C. Kedzie, of Michigan. Treasurer, Dr. J. B. Lindsley, of Tennessee. Executive Committee, Drs. C. B. White, of Louisiana; J. C. Cabell, of Virginia; E. M. Hunt, of New Jersey; D. D. Plunkett, of Tennessee; C. F. Folsom, of Massachusetts; and A. L. Gihon, U.S.N. The next meeting will be held at New Orleans.

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Louisiana State Medical Society.—The next annual meeting of this Society will be held at New Orleans, on the 31st of March.

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The Lieutenant-Governor of Quebec.—Theodore Robitaille, M.D., has been appointed Lieutenant-Governor of Quebec, and the medical schools of Montreal have forwarded to him congratulatory addresses on his elevation to the highest office in the Province.

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Professor Hebra.—We regret to learn that the health of this distinguished dermatologist does not permit him to lecture this winter. His place is supplied at present by his son-in-law, Prof. Kaposi, the joint editor of his great work on "Diseases of the Skin."

Bequests to the New York Academy of Medicine.—The late Dr. Freeman J. Bumstead bequeathed his entire medical library, which is particularly rich in works on venereal diseases, to the New York Academy of Medicine. The late Dr. Oliver White, of New York, recently deceased, left five hundred dollars to the same Society.

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Heavy Damages for Accident to a Medical Man.—Dr. C. D. Phillips, a London practitioner, recently brought an action against the London and South-western Railway Co. for damages sustained while travelling on the company's road, when the train came in collision with an engine standing on the line, which resulted in fracture of two of his ribs and severe injury to the spinal cord, causing partial paralysis, dyspnœa, and much pain. The opinion of eminent medical experts differed; some thinking that recovery was impossible, others that in three or four years he might recover to some extent. Dr. Phillips showed that his practice for the three preceding years had yielded him £6000 a year. He was awarded £7000 damages, and a new trial was granted on the ground that the damages were inadequate. In the second trial Lord Chief-Justice Coleridge charged the jury that the compensation was to be what they thought fair, and stated that in this accident he considered the defendants singularly free from all moral blame. The jury gave a verdict of £16,000 damages. Again a new trial was applied for on the ground that the damages were excessive, but was refused. It is intimated that the case will be appealed to the House of Lords.

This case has particular interest on this side of the Atlantic, owing to the very inadequate awards which are usually obtained under similar circumstances in our courts. In the State of Pennsylvania the maximum damages in any event obtainable in case of *death* is limited by Act of Assembly to the insignificant sum of $5000, or one-sixteenth the amount obtained in the English case of accident reported above.

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Literary Notes.

Changes in Medical Journals.—The January number of the *New York Medical Journal* appears under the editorship of Dr. Frank P. Foster, who has had more or less to do with medical journalism for some years past. In his introductory he gives the plan on which he proposes to conduct his journal, and which should result to the satisfaction of his readers and to the prosperity of the periodical. Dr. Hunter's management was able and always evinced a liberal and honourable spirit, and in his retirement he carries with him the esteem of his co-labourers.

New Medical Journals.—The Practitioner is a monthly, issued at Baltimore, under the editorial management of Drs. Harvey L. Byrd and Basil M. Wilkenson. The first number of 52 pages contains several original communications, some selections, and several editorials. The journal includes dentistry within its scope. We regret that its editors should have considered it desirable to give it the name which has long belonged to an excellent London periodical, and virtually the same as that of three other journals in this country.

The Alienist and Neurologist is a new quarterly devoted to psychiatry and neurology, and is edited by Dr. C. H. Hughes, of St. Louis. The first number presents an attractive appearance, and contains original communications from Drs. Curwen, Beard, Hughes, Dean, Stevens, Pliny Earle, and Allan McLane Hamilton. Selections and editorials complete the make-up of the journal.

The Kansas Medical Index is a small monthly of twenty-nine pages, issued at Fort Scott, under the editorial charge of Dr. F. F. Dickman, who is "persuaded that there is room and use for a live medical journal in the State of Kansas," and he proposes that the "Index" shall occupy the field.

The *Chicago Medical Gazette* is a neat-looking, 24-page quarto, published semi-monthly, and edited by Dr. E. C. Dudley. Its contents are varied, and the first number is well illustrated.

The College and Clinical Record is a 16-page monthly, conducted in the interests of the Alumni and students of the Jefferson Medical College, Philadelphia, and is edited by Drs. R. J. Dunglison and Frank Woodbury. Its object is to convey "the most reliable intelligence of current affairs at the Jefferson Medical College" and to furnish "a means of intercourse between graduates of the school." It will also contain reports of the Jefferson clinics, the introductory and valedictory addresses, etc. The first number presents a very attractive appearance.

The Annals of the Anatomical and Surgical Society is a monthly journal edited by Dr. Charles Jewett, and is the organ of the Brooklyn Anatomical and Surgical Society. It is beautifully printed on heavy toned paper, with wide margins. The initial number contains a valuable paper on "Cerebral Anatomy with special reference to the form of the Corpus Striatum," by Prof. Dalton, and a description of some specimens of "double monsters" in the museum of the society. The journal is published by G. P. Putnam's Sons, New York.

After a suspension of eight years, Dr. Greensville Dowell has recommenced the publication of the *Galveston Medical Journal*, assisted by Drs. J. F. Y. Paine and T. J. Heard.

Book Announcements.—Mr. H. C. Lea has now ready a translation of Cornil and Ranvier's "Manual of Pathological Histology," by Drs. E. O. Shakespeare and J. Henry C. Simes; he also announces a "Handbook of the Principles and Practice of Medicine," based upon Husband's Handbook of Practice, by Frank Woodbury, M.D., Physician to the German Hospital, Philadelphia; and "A Manual of the Diseases Peculiar to Women," by Dr. James R. Chadwick, of Boston. The second volume of Hartshorne's edition of Reynolds's "System of Medicine" is now ready for delivery to subscribers. In a few weeks will be published Dr. Reichert's edition of Foster's "Physiology," in which the editor's additions consist of a concise summary of structural physiology, with numerous illustrations.

Messrs. Wm. Wood & Co. announce the following new works to be published in their "Library of Standard Medical Authors," for 1880. "Venereal Diseases," by Dr. E. L. Keyes, of New York; "A Treatise on the Continued and Periodical Fevers," by Dr. James C. Wilson, of Philadelphia; a translation of "A Treatise on Foreign Bodies in Surgical Practice," by Dr. Alfred Poulet, Inspector at Val-de-Grace; "Diagnosis and Treatment of Diseases of the Ear," by Dr. Albert H. Buck, of New York; a translation of Trousseau and Pidoux's "Therapeutics;" a Treatise on "Common Forms of Menstrual Nervous Diseases," by Dr. L. Putzel, of New York; "Memoir Surgical Gynæcology," by Dr. Paul F. Munde, of New York; and a "Manual of Diseases and Deformities of the Joints," by Dr. Leroy M. Yale, of New York.

D. Appleton & Co. have in preparation a "Manual of Gynæcological Operations," by Dr. James B. Hunter, Surgeon to the New York State Woman's Hospital.

Smith, Elder & Co. announce a "Manual of Practical and Applied Anatomy," including human morphology, by H. A. Reeves, F.R.C.S., late Demonstrator of Anatomy at the London and Middlesex Hospitals.

The New Sydenham Society has resolved to reprint the classical work on "Diseases of the Chest," by the late Dr. William Stokes, of Dublin. The editor of the work will be Dr. Alfred Hudson, Regius Professor of Physic in the University of Dublin; and there is some reason to hope that the volume will contain a biography of Dr. Stokes from the pen of a near relative. The first volume of

the Society's series for 1880 will be Vol. V. of Hebra on "Diseases of the Skin," translated by Mr. Warren Tay.

Herr ENKE, of Stuttgart, has issued the prospectus of a new surgical work which is being published under the title of "Deutsche Chirurgie," and is edited by Professor Billroth, of Vienna, and Professor Lücke, of Strasburg. The work is being published in parts, each complete in itself as to paging and index; and any part can be bought apart from the others. When finished it will form a perfect text-book of surgery as represented by German surgeons; and from the eminence of its contributors it promises to be one of the best publications of the kind (if not *the* best) in any language. From the long list of subjects which have been assigned to different writers, we here give a few of the most important. Professor Recklinghausen treats of disturbances of the circulation and of nutrition, Professor Kaposi of syphilis, Professor Bruns of fractures, Professor Volkmann of diseases of the bones and joints; Professor Lücke takes up diseases of the thyroid gland, Professor Billroth those of the mamma; Professor Nussbaum has allotted to him injuries of the abdomen, Professor Esmarch diseases and injuries of the anus and rectum; Professor Mass has the sections on surgical diseases of the bladder and kidneys, and Professor Olshausen those of the ovaries. The same house announces the "Archiv für Kinderheilkunde," to be edited by Drs. A. Baginsky, M. Herz, and A. Monti.

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OBITUARY RECORD.—At New York, on the 28th of November, in the fifty-fourth year of his age, FREEMAN J. BUMSTEAD, M.D., President of the New York County Medical Society and late Professor of Venereal Diseases in the College of Physicians and Surgeons, New York.

Dr. Bumstead was a native of Boston, graduated in the Arts at Williams College, and in Medicine at Harvard University. He also studied in the hospitals of London and Paris, and was House-Surgeon at the Massachusetts General Hospital. In 1852 he settled in New York, and entered upon the practice of medicine. In 1858 he was appointed Professor of Venereal Diseases in the College of Physicians and Surgeons.

Dr. Bumstead is best known to the profession by his classical work on Venereal Diseases, which was first published in 1861, and has just reached a fourth edition, the last proof-sheets of which were read in the beginning of his fatal illness.

—— In this city, on the 9th of December, B. LINCOLN RAY, M.D., aged 43 years.

Dr. Ray was a frequent contributor to the Review Department of the *American Journal*, and his scholarly style and impartial criticism always rendered his writings attractive. His death is deeply lamented by a large circle of friends.

—— At Cannes, on the 2d of December, J. SOELBERG WELLS, M.D., F.R.C.S. Eng., Professor of Ophthalmology in King's College, London.

Mr. Wells received his degree of M.D. from the University of Edinburgh, after which he spent four years at the medical schools of Paris, Berlin, and Vienna, and then, having selected the diseases of the eye for his specialty, he studied ophthalmology under Graefe, Donders, and Helmholtz. In 1867 he received an appointment on the Staff of the Royal Ophthalmic Hospital, Moorfields. Possessed of natural abilities and good education, Mr. Wells soon won for himself a leading position among the ophthalmologists of London, and enjoyed a rich and select clientèle. In 1869 he published his elaborate "Treatise on the Diseases of the Eye and their Treatment," which has passed through three editions in England and two in this country, and enjoys the enviable reputation of being the best systematic work on the subject in the English language.

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